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The omitted parameters test indicated that the model underestimated the importance of current work satisfaction, which had small direct effect on intentions in addition to indirect effects through both intervening variables. In addition, results suggested that possible causal relationships between work/family conflict and organizational identification and career prospects need to be examined in future research.

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Junior Army Officer Retention Intentions: A Path Analytic Model

Martha L. Teplitzky
U.S. Army Research Institute

July 1991



**United States Army Research Institute
for the Behavioral and Social Sciences**

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U.S. ARMY RESEARCH INSTITUTE FOR THE BEHAVIORAL AND SOCIAL SCIENCES

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Technical Report 934

**Junior Army Officer Retention Intentions:
A Path Analytic Model**

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FOREWORD

Longitudinal Research on Army Careers (LROC) performed by the U.S. Army Research Institute for the Behavioral and Social Sciences (ARI) has become an important source of information for Army leaders and policy makers. The LROC program was implemented in 1988 as an expansion and extension of Project Proteus, the earlier, West Point initiated effort to document the career and family concerns of junior officers. The LROC survey was designed to provide immediate answers to important practical questions, and also to allow theoretically derived models to be tested and revised.

The research described in this report focuses on a particularly important group of officers--those about to make the decision to pursue either a military or a civilian career. The model addresses the work, career, organizational, and family factors that influence the career decisions of married junior officers. The results provide information useful for both manpower planners and leaders charged with ensuring that the Army continues to attract and retain highly motivated and highly qualified young officers.


EDGAR M. JOHNSON
Technical Director

JUNIOR ARMY OFFICER RETENTION INTENTIONS: A PATH ANALYTIC MODEL

EXECUTIVE SUMMARY

Research Requirement:

Requirements to reduce the size of the Army Officer Corps yet maintain a high quality, committed force make it imperative that Army leaders understand the factors and processes that influence the career decisions of junior officers. Although many variables have been empirically linked to retention decisions, research testing comprehensive causal models is required to clarify the operation and joint effects of these variables.

Procedure:

A review of the military and civilian turnover literature led to the development of a path model specifying both direct and indirect determinants of officer intentions to stay in the Army. The model proposed that organizational identification, years of military service, and positive perceptions of one's career prospects in the Army would all have positive, direct effects on propensity to stay. Anticipated work/family conflict was predicted to have an independent, negative effect on propensity to stay. Five additional variables were hypothesized to have only indirect effects on propensity to stay, exerting their influence through effects on the intervening variables, perceived career prospects, and organizational identification.

The analysis sample consisted of 757 married, male, ROTC and USMA officers commissioned between 1984 and 1987 and drawn from the respondents to the 1989 Longitudinal Research on Officer Careers (LROC) survey. Preliminary factor analyses were used to examine and refine the scales measuring the direct determinants. Path analytic techniques were used to test both the predicted model and the alternative, less restricted model. Path coefficients were obtained in the traditional manner using a series of Ordinary Least Squares (OLS) regression equations. Exploratory analyses included an examination of residuals and hierarchical multiple regression analyses with an expanded set of predictors.

Findings:

The path analysis results generally supported the model. Organizational identification had a strong positive effect on propensity to stay and anticipated work/family conflict had a

comparable negative effect. Significant, but smaller, positive effects were obtained for perceptions of Army career prospects and time in service. Together, these variables explained approximately half the variance in propensity to stay.

With regard to the five antecedent variables, operational support, work satisfaction, and assignment to the desired branch all had the predicted positive impact on perceptions of Army career prospects. Prior career orientation (i.e., leaning toward a military career upon entry) did not have a significant effect on perceived career prospects, but it did have the expected effect on organizational identification. The two other variables predicted to enhance organizational identification (operational support and inspirational leadership) also had significant path coefficients.

Analyses examining all possible paths from the exogenous to the endogenous variables suggested two ways the model might be improved. First, although the model predicts propensity to stay quite well, it underestimates the importance of current work satisfaction. Work satisfaction displayed an unexpected small direct effect on intentions, as well as indirect effects through both intervening variables. Second, the interrelationships among work/family conflict, identification, and career prospects warrant examination. Future research and theory may provide a basis for specifying directions of causal influence.

Exploratory analyses also suggested areas for future research. Officers with career oriented spouses, for example, were more inclined to leave the Army. On the other hand, a number of officers reported that their current family situation made it difficult to leave the Army. When this variable was added to model it emerged as one of the most powerful independent predictors of propensity to stay. The complicated relationship between work and family clearly warrants further attention.

Utilization of Findings:

The results of this research may be useful in several contexts. First, the importance of work/family conflict as a decision factor suggests that Army leaders need to continue efforts to mitigate the negative impact an Army career can have on families. Evidence that organizational identification has a strong influence on career decisions suggests that policies and practices that reduce the distinctiveness, prestige, and climate of caring in the organization are likely to hurt efforts to retain highly committed people.

There are also implications for the short term, as manpower planners try to reduce the size of the force. It appears some officers who might otherwise leave the Army feel constrained to

stay because of personal or family difficulties associated with leaving. Efforts to identify and help soldiers resolve these problems could encourage more voluntary turnover and lessen the pain of downsizing.

JUNIOR ARMY OFFICER RETENTION INTENTIONS: A PATH ANALYTIC MODEL

CONTENTS

	Page
INTRODUCTION	1
Theoretical Assumptions About Decision Processes	8
Literature Related to the Direct Determinants	11
Literature Related to Indirect Determinants	24
Potential Determinants Omitted from the Model	41
Model Specification and Research Design Issues	44
METHOD	52
RESULTS	64
Preliminary Analyses	64
Path Analysis	76
Exploratory Regressions with Propensity to Stay	87
DISCUSSION	98
REFERENCES	113
APPENDIX: A PRIORI AND FINAL SCALE ITEMS FOR VARIABLES IN OFFICER CAREER DECISION MODEL . . .	A-1

LIST OF TABLES

Table 1. 1989 LROC population and sample statistics for ROTC and USMA male officers by year group	54
2. Frequency distributions for the two propensity to stay items	57
3. Scale statistics and intercorrelations for indirect determinants	59
4. Principal components analysis results: Original items for direct determinants scales	65
5. Factor analysis communality estimates: Original items for direct determinants scales	66

CONTENTS (Continued)

	Page
Table 6. Pattern and structure matrices for oblique rotation of common factors: Original items for direct determinants scales	67
7. Principal components analysis: Reduced set of items for direct determinants scales . .	70
8. Factor analysis communality estimates: Reduced set of items for direct determinants scales	71
9. Pattern and structure matrices for oblique rotation of common factors: Reduced set of items for direct determinants scales	72
10. Direct determinants: Scale statistics, intercorrelations, and correlations with propensity to stay	74
11. Correlations between indirect determinants, direct determinants and propensity to stay . . .	74
12. Hierarchical multiple regression results for propensity to stay using predicted and nonpredicted paths	79
13. Hierarchical multiple regression results for career prospects using predicted and nonpredicted paths	81
14. Hierarchical multiple regression results for organizational identification using predicted and nonpredicted paths	82
15. Total, direct and indirect effects on propensity to stay for empirical model	85
16. Regression results testing source of commission moderating effects on propensity to stay	89
17. Descriptive statistics and intercorrelations for exploratory variables	93

CONTENTS (Continued)

	Page
Table 18. Additional variance explained in propensity to stay by three sets of exploratory variables	94
19. Hierarchical multiple regression results for propensity to stay using model and significant exploratory variables	96

LIST OF FIGURES

Figure 1. Proposed junior officer career intentions model	6
2. Path coefficients for the proposed career intentions model	77
3. Path coefficients for empirically derived model	84

JUNIOR ARMY OFFICER RETENTION INTENTIONS:
A PATH ANALYTIC MODEL
INTRODUCTION

Organizational turnover research has a long history. The impetus for this work stems from the important implications of turnover research for both organizations and individuals. For organizations, an understanding of the precursors of turnover can facilitate efforts to better predict and manage the process. At the same time, the results of turnover research can inform efforts to develop programs and policies that enhance employee satisfaction and career development.

Efforts to identify the antecedents of turnover began with analyses of the bivariate correlations between job attitudes, particularly satisfaction, and turnover. In the past decade, however, a number of multivariate models of the factors and processes involved in turnover decisions have been proposed and tested. The results of these analyses are promising, yet the types of variables examined as antecedents of turnover decisions are still somewhat limited. Theoretical explanations for observed effects are also frequently lacking, and few researchers have tried to refine general models to fit the demographic, occupational or organizational characteristics of different research populations.

The present research tests an expanded model of the determinants of turnover intentions and suggests alternative ways of conceptualizing key variables. Career and family factors are incorporated into the model, along with a commitment-like construct defined as organizational identification. The variables included in the model also reflect assumptions about the factors likely to be especially salient for the population of interest: married, male, junior Army officers.

An applied objective of this research is to provide the Army with useful information on the career decisions of an important subgroup of officers. The officers examined in this research are still in the early stages of their careers, at or near the point at which officers typically make the decision to stay in the Army or leave to pursue a civilian career. Millions of dollars are spent annually to attract and train new officers. It costs close to \$200,000 just to send one cadet through West Point, and the Army costs for one ROTC cadet range from \$66,000 to \$80,000 (Adelsberger, 1988). Premature separations not only involve high replacement costs, but also limit the Army's ability to be selective in promoting and assigning junior officers to key leadership positions. Impending budget cuts and mandates to reduce the size of the officer corps make it especially critical that Army manpower planners today understand the factors that influence the career decisions of junior officers.

From a theoretical perspective the goal of this research is to contribute to the development of parsimonious, theoretically defensible models of the factors and processes involved in turnover decisions. The proposed model builds on existing theory

and research, yet incorporates a broader focus, addressing family and career concerns as well as satisfaction and attachments to the organization. The model also reflects an analysis of the unique characteristics of military organizations and the factors likely to be especially relevant in these settings.

To provide a context for the discussion of the proposed model, the literature review begins with a brief overview of contemporary models of organizational turnover. Following this overview, the proposed model is summarized and underlying theoretical assumptions are discussed. The pertinent civilian and military literature is then reviewed in the context of the hypothesized model linkages. The final section of the introduction addresses general research design and model specification issues. For convenience and because the sample for this and most officer research consists only of male officers, masculine pronouns are used throughout this paper to refer to officers.

Contemporary Models of Organizational Turnover

Contemporary turnover models reflect a variety of sociological, economic and psychological perspectives. These models differ in terms of the nature of the variables they examine, their focus on content versus process, and the emphasis on antecedents or consequences of turnover.

Models reflecting a sociological perspective (Bluedorn, 1982a, 1982b; Price, 1977; Price & Mueller, 1981) tend to be content oriented. Although psychological variables (especially job satisfaction and organizational commitment) are often included as intervening variables in these models, the research focus is on the structural and organizational antecedents of turnover (e.g., centralization, integration, routinization). There is little consistency across these studies with regard to the effects and relative importance of structural characteristics in individual turnover decisions. Results do, however, suggest that factors likely to increase worker autonomy and responsibility (e.g., low routinization, instrumental communication) are often related to job satisfaction and commitment, and thus have important indirect effects on turnover (Bluedorn, 1982b; Martin, 1979; Price & Mueller, 1981; Thompson & Terpening, 1983).

Models with their roots in the industrial psychology or organizational behavior literature may also include structural variables as antecedents. The primary focus of these models, however, is on the more proximal psychological processes and attitudinal antecedents involved in turnover decisions.

Most psychological models are built on an expectancy theory framework, suggesting that rational evaluation processes and utility maximization principles underlie turnover decisions (Forrest, Cummings, & Johnson, 1977; Mobley, Griffeth, Hand & Meglino, 1979; Rhodes & Doering, 1983). The Mobley et al. (1979) model reflects this orientation and, buttressed by a comprehensive review of the literature, has had a major impact on turnover research in the past decade.

In the Mobley model, behavioral intentions (to search for alternatives and to quit one's job) are proposed as the only direct determinants of turnover. The primary determinants of turnover intentions are hypothesized to be: (a) current job satisfaction, (b) the expected utility of the current job for the attainment of desired outcomes, and (c) the expected utility of alternatives to the present job.

The specification of satisfaction as a central variable in the model is based on years of research documenting the bivariate relationship between job satisfaction and turnover. The expected utility constructs in the Mobley model reflect the influence of expectancy theory. The model assumes that individuals assess the likelihood of obtaining desired (and/or aversive) outcomes in different situations, and then choose the alternative with the highest expected utility.

The notion that turnover decisions are influenced by the quality and/or availability of alternatives is not new. March and Simon (1958) introduced a similar "ease of movement" construct into the organizational participation literature 30 years ago. The Mobley model did, however, spark a renewed interest in the empirical assessment of alternatives. Unfortunately, the operationalization and placement of this construct varies markedly across studies. A recent review of the literature concluded that the effects of perceived alternatives are weak and inconsistent (Hulin, Roznowski, & Hachiya, 1985). There is stronger support for the hypothesis that expectations about rewards forthcoming from the current job influence turnover decisions.

Models based on Fishbein and Ajzen's (1975; Ajzen & Fishbein, 1980) theory of reasoned action are similar to expectancy based models in their focus on the consequences of turnover decisions. Instead of assessing evaluations of alternative jobs, however, these models examine attitudes toward the act of leaving the present organization. Reasoned action models also go beyond the instrumentality approach by postulating a normative component in the decision process. Subjective norms, construed as beliefs about, and the motivation to comply with what important others think one should do, are also hypothesized to influence turnover intentions. Although not frequently examined, subjective norms appear to be a promising explanatory

construct (Hinsz & Nelson, 1990; Hom & Hulin, 1981; Newman, 1974; Prestholdt, Lane & Mathews, 1987).

Another body of research has accumulated around the role of organizational commitment in turnover decisions. The dominant stream of research is guided by Porter, Steers, and Mowday's conceptualization of organizational commitment (Mowday, Porter, & Steers, 1982; Porter, Steers, Mowday, & Boulian, 1974). The Porter et al. (1974) definition of commitment is multidimensional, including perceptual, attitudinal and intentional components. Measures of the construct show consistent and fairly strong correlations with turnover intentions, and when intentions are excluded, turnover behavior (Cotton & Tuttle, 1986; Mathieu & Zajac, 1990; Steel & Ovalle, 1984).

The theoretical utility of such a broadly defined construct has been questioned, however. Consequently, a number of researchers are now examining more specific components of commitment (McGee & Ford, 1987; Meyer & Allen, 1984; O'Reilly & Chatman, 1986) or different referents of commitment in organizations (Lachman & Aranya, 1986; Reichers, 1986; Weiner & Vardi, 1980). Evidence that different components and referents of commitment are differentially related to attitudes and behaviors suggests that further work on more narrowly defined "commitment-like" constructs is warranted.

Other pertinent work fits into what might be called the "too much invested to quit" paradigm (Teger, 1980). Models based on Becker's (1960) "side bets" or investment theory of behavioral commitment reflect this approach, proposing that the costs of leaving of an organization play an important role in turnover decisions (Farrell & Rusbult, 1981; Rusbult & Farrell, 1983; Stevens, Beyer, & Trice, 1978). These models also generally assume that the costs of leaving an organization increase over time as employees acquire privileges associated with seniority or become more invested in retirement plans. Thus, the oft observed negative relationship between turnover and age or tenure is interpreted as support for this model (Cohen & Lowenberg, 1990).

In addition to the considerable research on the antecedents of turnover, concerns about the individual and organizational consequences of turnover have been addressed (Muchinsky & Morrow, 1980; Steers & Mowday, 1981), and the relationship between job performance and turnover has been explored (Dreher, 1982; Jackofsky, 1984; Wells & Muchinsky, 1985). These studies, and the work on the specific withdrawal cognitions and search and comparison activities that precede the turnover decision (Hom, Griffeth & Sellaro, 1984; Mobley, 1977; Mobley, Horner & Hollingsworth, 1978) are less relevant to the model proposed here.

In summary, the turnover literature is characterized by a variety of approaches and theoretical perspectives. A common theme, however, is that affective reactions to the job and/or organization are important determinants of turnover intentions. Reviews of the organizational turnover literature support this notion, indicating that job satisfaction and organizational commitment are relatively strong and consistent correlates of turnover cognitions and behavior (Cotton & Tuttle, 1986; Mobley et al., 1979; Steel & Ovalle, 1984; Steers & Mowday, 1981). Furthermore, despite their generally high intercorrelations, satisfaction and commitment typically account for independent variance in turnover intentions (Arnold & Feldman, 1982; Bluedorn, 1982; DeCotiis & Summers, 1987; Dougherty, Bluedorn, & Keon, 1985; Lachman & Aranya, 1986; Lee & Mowday, 1987; Michaels & Spector, 1982; Porter et al., 1974).

There is also evidence that multiple psychological processes underlie turnover decisions; no single explanatory framework is clearly superior or sufficient. Results supporting elements of investment and expectancy based models imply that rational, utility based evaluation and comparison processes are involved. At the same time, immediate affective reactions to the job, psychological bonds to the organization, and normative influences also appear to influence turnover decisions.

In the absence of a clearly dominant theoretical framework, the approach adopted here is somewhat eclectic. The proposed model builds on research demonstrating the importance of anticipated outcomes, job satisfaction and organizational commitment, but attempts to specify more precisely the critical dimensions of these variables. The theoretical model also reflects a consideration of the special characteristics of military organizations and the career and family life cycle stages of officers in the target population.

An overview of the model is presented in the next section. Following the overview, explanations for the different ways key variables might operate in the decision process are advanced. The discussion focusing on processes is designed to more clearly differentiate the nature of the proposed determinants of turnover intentions.

Overview of the Proposed Model

The present research is concerned with the attitudinal and perceptual determinants of junior officer turnover intentions. A causal model of the direct and indirect determinants of "propensity to stay" is tested using path analytic techniques (see Figure 1).

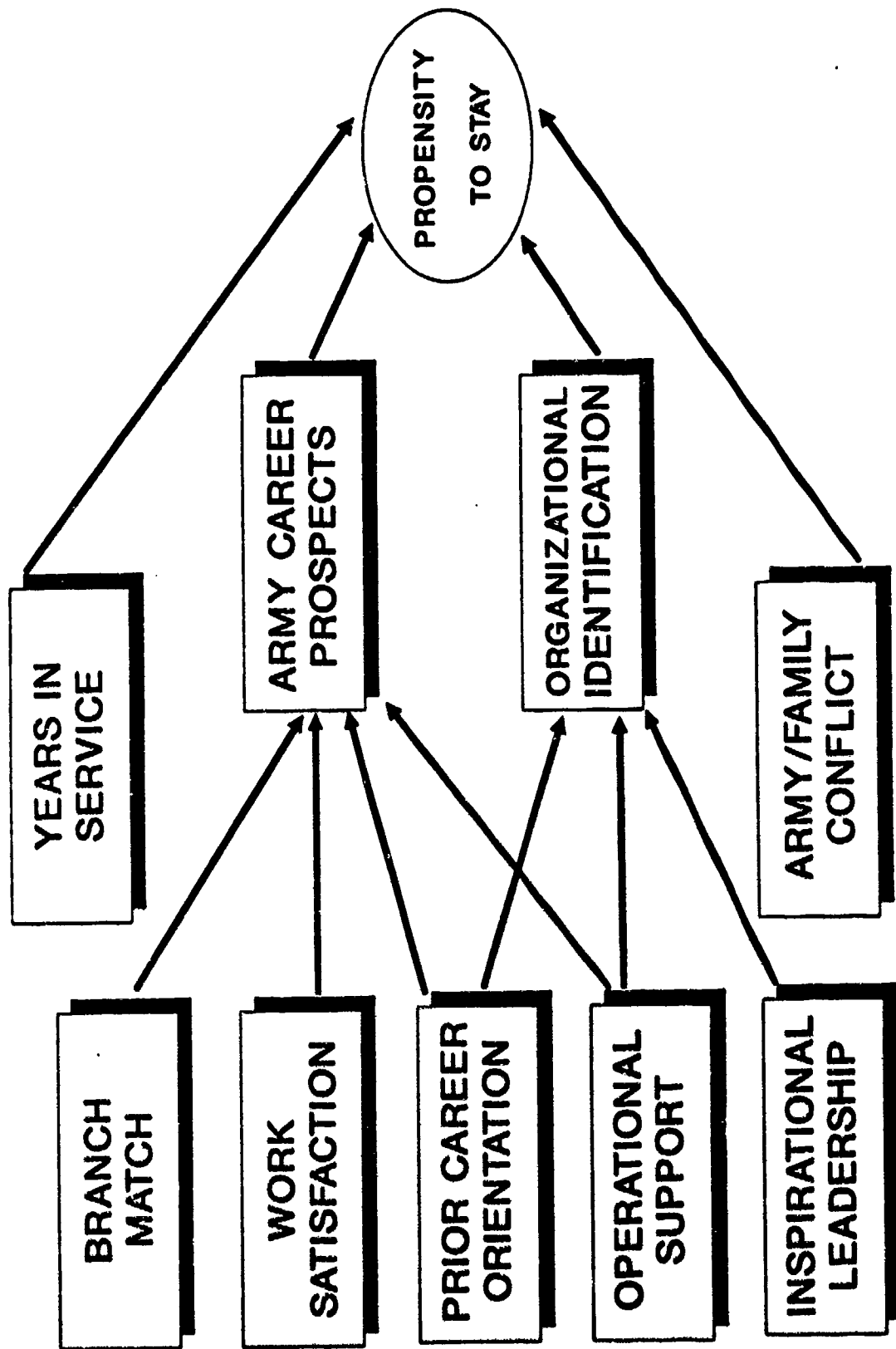


Figure 1: Proposed Junior Officer Career Intentions Model

The dependent variable, "propensity to stay", reflects an officer's intentions or plans with regard to the Army; specifically, does he intend to make the Army a career or leave the organization to pursue a civilian career. Turnover intentions typically exhibit high correlations with actual behavior (Steel & Ovalle, 1984), thus the test of the model can contribute to our understanding of the causes of actual turnover. At the same time, propensity to stay is an important dependent variable in its own right. Whether employees actually leave or not, organizations need to be aware of the factors that make employees want to leave.

Four variables are proposed as direct determinants of propensity to stay in the model. These variables include: (a) the officer's assessment of his prospects for a satisfying career in the Army, (b) the extent to which the officer identifies with the Army, (c) the level of work/family conflict the officer anticipates if he stays in the Army, and (d) the number of years the officer has been on active duty in the Army.

An additional five variables are hypothesized to affect propensity to stay indirectly through effects on perceived career prospects and organizational identification. These antecedent variables include: (a) the match between the officer's preferred and assigned branch, (b) opportunities for intrinsic satisfaction in the current work assignment, (c) prior orientation toward or plans for a military career, (d) perceptions of the effectiveness of the operational, work-related support provided by the organization, and (e) exposure to inspirational leadership.

Two variables, prior career orientation and operational support, are hypothesized to influence both career prospects and organizational identification. Person/branch match and work satisfaction are expected to influence only career prospects, and inspirational leadership is hypothesized to affect only organizational identification.

The organizational commitment literature indicates that "commitment-like" constructs often mediate the effects of organizational perceptions and experiences. This literature (reviewed later) provides support for the hypothesis that organizational identification is an important intervening variable. The proposed model posits that experiences in the organization, particularly with respect to leaders and operational support, will influence the way an individual feels about and relates to the organization. These experiences are not, however, expected to influence turnover intentions net of their effects on identification with the organization.

There is less empirical support for the hypothesized mediating role of career prospects. Arguments for the centrality of this variable in the proposed model are based on two unique features of the military. First, the decision to stay in the Army reflects a career choice as well as an organizational choice. Second, job assignments in the military are varied and temporary; the typical assignment lasts only two to three years. In light of these considerations and the rational evaluation processes expected to play a part in turnover decisions, perceptions of long-term career prospects in the organization are hypothesized to be stronger, more immediate determinants of intentions than prior plans or current satisfaction. Prior plans and satisfaction with the current assignment are expected to shape perceptions of career prospects, but they are not expected to influence propensity to stay once the effects of the direct determinants are taken into account.

Possible antecedents of anticipated work/family conflict are not explored in this research. The military literature suggests that a variety of personal, family and job related factors interact to determine perceptions of work/family conflict. Examination of this complex constellation of factors is beyond the scope of the present study. Future work in this area will be clearly warranted, however, if the results of this research suggest that work/family conflict is indeed an important factor in turnover decisions.

To summarize, the primary purpose of the research is to determine the independence, predictive utility, and sufficiency of the four proposed direct determinants of retention intentions: organizational identification, work/family conflict, Army career prospects, and years of service. There are clear empirical and theoretical advantages, however, in also specifying potential indirect determinants of retention intentions. First, conclusions about the utility and sufficiency of the four central variables will be strengthened if paths from variables not expected to have direct effects on propensity are tested and found to be unimportant. Second, testing paths from the antecedent variables to the proposed intervening variables will contribute to future efforts to identify the determinants of career prospects and organizational identification.

Theoretical Assumptions About Decision Processes

Career Prospects

Perceptions of Army career are proposed as a central variable in the model because it is assumed that: (a) officers value opportunities for advancement and interesting, engaging careers, (b) they assess the likelihood that staying in the Army will provide these opportunities, and (c) positive evaluations of career prospects are an inducement to stay in the organization.

These premises are consistent with data demonstrating the importance of intrinsic job/career rewards in turnover decisions. The assumptions also reflect the expectancy theory framework in that they assume that rational evaluation processes and utility maximization principles are involved in turnover decisions.

Years of Service

The hypothesized positive effects of years of service on propensity to stay can be explained within the investment or "side-bets" framework. Tenure in an organization represents a time investment likely to have economic consequences for the employee. This is particularly the case in the military, where eligibility for retirement benefits depends on length of service. Officers who stay for 20 years receive annual retirement benefits equivalent to half of their salary; those who leave before 20 years of service receive nothing. With each passing year, then, the perceived opportunity costs of leaving the organization are likely to increase.

Tenure may also reflect a knowledge or skill investment in an organization. Organizationally specific expertise acquired through years of experience is likely to be valued within the organization, but may not be easily marketed elsewhere. The expected positive effect of tenure on propensity to stay is viewed as resulting from an evaluation of the costs of sacrificing these tenure related investments. In other words, individuals with more time in an organization may decide to stay simply because they have "too much invested to quit".

Organizational Identification

The inclusion of a variable assessing feelings about the organization is clearly warranted in organizational turnover research. Typically, the relevant organizational variable is conceptualized as "commitment". Yet when commitment measures include intentions or desire to remain with the organization (as most do) evidence that commitment is related to turnover intentions is almost tautological. Another limitation is that typical conceptualizations of commitment are not grounded in theories that offer an understanding of the distinctive nature of the phenomenon (Scholl, 1981; Weiner, 1982).

A focus on organizational identification may be more fruitful from a theoretical perspective. The fairly recent literature on social identity theory (Ashforth & Mael, 1989; Turner, 1987) offers a precise definition of identification and a theoretical framework that suggests how identification may influence propensity to stay. Identification is said to occur when membership in the group becomes a salient element in the individual's social self-concept, or central to the way he defines himself. In highlighting the importance of the self-

concept and internalized norms, social identity theory is compatible with theories emphasizing the importance of internal and external normative pressures in the turnover decision process (Fishbein & Ajzen, 1975; Fishbein, 1980; Weiner, 1982). Strong identification with an organization may make it difficult to leave both because organizational norms against resigning are internalized, and because leaving is tantamount to renouncing an important aspect of one's social identity.

Work/Family Conflict

Despite calls for the inclusion of nonwork or family factors in turnover models (Mobley et al., 1979; Schein, 1978; Schneider & Dachler, 1978; Steers & Mowday, 1981), family factors have been largely neglected in civilian turnover research. The importance of family considerations is well documented in the military literature, however (e.g., Orthner, 1990).

Perceptions of work/family conflict may influence turnover decisions both through rational utility evaluations and normative pressures. For some, separations and family life disruptions may be viewed as costs of staying in the organization, factors to be weighed against the economic and career related advantages of staying. Yet internal and external norms related to work and family may also be a factor. Family values and role expectations may preclude staying in an organization where job demands or organizational needs take precedence over family needs.

Summary

In summary, the variables proposed as direct determinants of propensity to stay reflect assumptions about the psychological processes, as well as the critical factors or content areas, that influence turnover decisions. Consistent with expectancy theory, decisions are presumed to be guided to some extent by expectations that desirable career and economic outcomes will be achieved. If utility is broadly defined to include family outcomes, utility maximization principles may also account for the influence of work/family conflict on propensity to stay.

Internalized norms and self-defining values are also expected to come into play, however. When an officer strongly identifies with the Army, for example, the need to be "true to oneself" or loyal to the organization may lead to a decision to stay even when career and economic considerations might dictate leaving. Similarly, if serious work/family conflicts are anticipated, internal or external (e.g., spouse) norms related to family roles may induce individuals to leave even when the utility "balance sheet" suggests that they should stay.

The distinction between instrumental and normative influences is consistent with the conceptual frameworks offered by Scholl (1981) and Weiner (1982). Both argue that commitment-like constructs are theoretically useful only if they explain behavior that cannot be predicted within traditional expectancy and equity based motivational models. Scholl (1981), in fact, defines commitment as a "stabilizing force that acts to maintain behavioral direction when expectancy/equity conditions are not met and do not function" (p. 593).

In light of the different processes implied by the four direct determinants in the model, data on the magnitude of the effects of these variables may point to processes, as well variables, that require additional attention in the study of turnover.

Literature Related to the Direct Determinants

Career Prospects

Overview and Definition

A career is typically viewed as an occupational, professional, or organizational "path" an individual follows (Schein, 1978). Implicit in this definition is the notion that a career involves a developmental sequence of positions, typically leading to higher levels of expertise and work role responsibility (Hall, 1976; Rapoport & Rapoport, 1978).

The term "career prospects" in this research refers to perceived opportunities for career-enhancing assignments, advancement within the individual's chosen career field, and work that matches the individual's skills and interests. The hypothesized effect of career prospects on propensity to stay is based on (a) research suggesting that anticipated outcomes, particularly with respect to opportunities for advancement and challenge, influence turnover decisions; and (b) evidence that career goals provide a context for evaluating the utility of staying in the organization.

Anticipated Outcomes

The notion that anticipated outcomes influence employment decisions is a central thesis of models derived from expectancy theory (Forrest et al., 1977; Mobley et al., 1979; Rhodes & Doering, 1983). As Mobley et al. (1979) observe, an employee can be unhappy with certain aspects of a job, yet be attracted to and intend to stay on the job because it is expected to facilitate the attainment of valued outcomes or goals in the future. Accordingly, Mobley et al. (1979) proposed that perceptions of the expected utility of the present job (along

with perceptions of alternatives and current job satisfaction) would be an important determinant of turnover intentions.

In expectancy models, the "force" toward, or expected utility of an alternative is presumed to be a multiplicative function of three factors: (a) the likelihood that different outcomes will be associated with or result from the alternative (i.e., "instrumentality"); (b) the desirability or valence of the various outcomes; and (c) the expectancy that the individual can obtain (or keep, in the case of a present job) that alternative. Research on job choice and turnover, however, suggests that complicated multiplicative measures of expected utility are not necessary. Simple indices obtained by summing instrumentality ratings (i.e., expectations that positive outcomes will be associated with an alternative) generally predict employment decisions better than the more complex weighted measures (Hom, 1980; Hom, Griffeth, & Sellaro, 1984; Hom & Hulin, 1981; Lawler, Kuleck, Rhode, & Sorenson, 1975; Mitchell & Knudson, 1973; Mobley, Hand, Baker & Meglino, 1979; Oldham, 1976; Schneider, 1976). Although these results fail to support the full theoretical model, they do show the importance of anticipated outcomes in turnover decisions (Hom, Griffeth, & Sellaro, 1984; Hom & Hulin, 1981; Mitchell & Albright, 1972; Mobley, Hand, Baker & Meglino, 1979; Parker & Dyer, 1976; Schneider, 1976).

A key question in formulating parsimonious expectancy models concerns the nature of the most important outcomes individuals consider when they evaluate their alternatives. The present model assumes that, in the work context at least, employees are most concerned with opportunities for advancement and intrinsically satisfying work.

Meta-analyses of the correlates of turnover decisions support this assumption. Cotton and Tuttle's (1986) results indicated that satisfaction with promotion opportunities is a fairly strong and consistent correlate of turnover. Steel and Ovalle's (1984) meta-analyses showed that satisfaction with the work itself is also a consistent correlate of turnover, with a mean correlation ($r=.28$) that is slightly higher than the mean correlation between measures of overall job satisfaction and turnover ($r=.25$). In other words, global or composite measures that include attitudes regarding other aspects of the job (e.g., pay, co-workers, supervision, working conditions) fail to predict turnover any better than simple measures of intrinsic satisfaction with one's work. There is also evidence that intrinsic satisfaction and advancement opportunities are particularly strong predictors of retention for "white collar" workers (Flowers & Hughes, 1973; Thompson & Terpening, 1983) and college graduates still in the early exploratory, or "trial" stages of their careers (DePasquale & Lange, 1971; Dunnette, Arvey & Banas, 1973; Hall, 1976).

Dunnette et al. (1973), for example, found that opportunities to use abilities and get ahead were among the most valued attributes of a job in a sample of newly hired college graduates. Although few in the sample found that their jobs fulfilled their high expectations, discrepancies between expected and experienced opportunities for challenge and advancement were considerably greater among those who subsequently left the organization.

Career Considerations

Surprisingly few researchers conceptualize anticipated work outcomes as career considerations. The shift in emphasis from expected job or work outcomes to anticipated career outcomes is subtle, but important.

As noted earlier, a career involves a related sequence or progression of assignments, typically leading to higher levels of responsibility and expertise. The notion that employees base utility assessments on career prospects suggests a longer term, more goal oriented perspective than is implied in the anticipated job outcomes framework. In other words, the present model assumes that turnover decisions are based on a desire to maximize long-term career satisfaction, not simply day-to-day job satisfaction.

Military researchers have been most likely to frame questions about future outcomes in a career context, probably because the decision to leave the military involves a career, as well as an organizational choice. Perceptions that a military career offers challenging and meaningful work, a sense of accomplishment and opportunities for advancement are strongly and consistently related to military officers' retention decisions (Ashcraft, 1987; Gibb, Nontasek, Dolgin & Helm, 1987; Faris, 1984; Hayden, 1985; Meola & Koechel, 1983; Monks, 1979; Schmidt, 1982; Shenk & Wilbourn, 1971; Steele, 1987; Szoc, 1982). Faris (1984), for example, found that the belief that a military career would be more interesting than civilian work was a very strong predictor of retention intentions. Perceptions of differences in pay, on the other hand, had no effect; the majority of all officers, even those intending to stay, believed that they would earn less in the military than in a comparable civilian job.

Jans (1988) developed the career construct further in his research on the careers of officers in the Australian Defence Force. His analyses included a measure of "career prospects" similar to the one proposed here. Jans' measure addressed promotion prospects, likelihood of getting satisfying assignments, and satisfaction with the service's career management practices. In a regression equation that included eight other theoretically important attitudinal and perceptual variables, career prospects was the strongest (albeit, by only a

slight amount) predictor of a measure of career involvement. Career involvement, in turn, was the strongest predictor of propensity to stay in the military.

Research in civilian organizations also suggests that career considerations play a role in turnover decisions. In one of the earliest studies, Farris (1971) asked a group of scientists and engineers whether it would be more profitable to their career development to remain in their current technical division or move elsewhere. Across two organizational samples, the career development variable was more strongly and consistently related to turnover than any other job factor examined (e.g., influence, diversity, contacts, working hours).

Schneider and Dachler (1978) addressed career concerns in a slightly different way, asking employees the extent to which the organization facilitated or inhibited progress toward their career goals. When turnover intentions were regressed on a variety of work, family, and career related variables, organizational career facilitation entered the regression first in both halves of a cross-validation analysis. This variable alone accounted for an impressive 25% of the variance in intentions to leave.

Graen and his colleagues also focused on careers, asking employees how relevant their present work was to their career plans. Analyses based on both newly hired (Graen, Orris, & Johnson, 1973) and established (Graen & Ginsburgh, 1977) nonsupervisory, clerical employees indicated that when perceived career relevance was high, employees were more satisfied and less likely to resign. The results were especially striking in the sample of new employees. Within 10 months of the beginning of the study, over twice as many "low career relevance" as "high career relevance" employees had quit (59% vs. 25%). In the sample of relatively established employees, an interaction effect was observed; employees with low scores on both career relevance and leader acceptance measures were particularly likely to leave.

Scholl (1983) developed an objective measure of promotion prospects in the organization based on ratios of (a) the number of vacancies in the position above the focal position relative to the number of incumbents in the focal position, and (b) the number of incumbents in the next higher position relative to the number of incumbents in the focal position. Both indices of internal mobility opportunities were related to intended and actual turnover.

Summary

In summary, the literature supports the hypothesis that perceived career prospects will be an important predictor of propensity to stay. Past research confirms the importance of

each element of the current operationalization of career prospects (anticipated rewards, intrinsic satisfaction and advancement opportunities, and career goals). Furthermore, the literature suggests that career considerations are especially salient for employees similar to those in the present study - military officers, white collar employees and recent college graduates.

Organizational Identification

Commitment in the Turnover Literature

The implications of organizational identification are best understood in the context of the broader commitment literature. In their comprehensive review, Mobley et al. (1979) concluded that organizational commitment is "significantly and negatively related to turnover and more strongly related to turnover than to satisfaction" (p. 508). Research subsequent to this review has also demonstrated that organizational commitment is a consistent negative correlate of both turnover intentions and behavior (Arnold & Feldman, 1982; Bluedorn, 1982; Dougherty, Bluedorn, & Keon, 1985; Michaels & Spector, 1982; Mowday, Steers, & Porter, 1979; Williams & Hazer, 1986).

Many turnover researchers have adopted the Porter et al. (1974) definition of organizational commitment as "the strength of an individual's identification with and involvement in a particular organization" (p. 604). More specifically, organizational commitment is said to be characterized by: (a) a strong belief in and acceptance of the organization's goals and values, (b) a willingness to exert considerable effort on behalf of the organization; and (c) a definite desire to maintain membership in the organization (p. 604). Each of these three components of commitment is tapped in the Organizational Commitment Questionnaire (OCQ, Mowday, Steers, & Porter, 1979).

The widespread use of the OCQ in turnover research attests to the popularity of this multi-dimensional conceptualization of commitment. Over the course of the past decade, however, a number of theorists have questioned the analytical utility of such a complex construct (DeCotiis & Summers, 1987; Graen & Johnson, 1977; Mobley et al., 1979; Morrow, 1983; Reichers, 1985; Scholl, 1981). Typically critics argue that more specific components or forms of attachment to an organization need to be examined. Mobley et al. (1979), for example, suggested that the congruence between individual and organizational values can vary independently of the other two components of commitment, and therefore should be examined separately. Mobley and his colleagues also noted that the importance of commitment relative

to other antecedents of turnover is difficult to assess when commitment measures include items tapping behavioral intentions to remain with the organization.

In a similar vein, Scholl (1981) argued that when commitment is defined largely in terms of intentions to exert effort and remain with the organization, it is superfluous. Antecedents of commitment can be related directly to the effort or turnover intentions of interest, obviating the need for the global commitment construct.

Porter and his colleagues made an important contribution to the literature by encouraging researchers to look beyond job-specific attitudes in their search for the determinants of turnover. The emerging consensus, however, is that theory development is best served by research on more specific, conceptually distinctive dimensions of attachment to an organization. Organizational identification appears to be a promising construct because it is unidimensional, and its operation can be explained within existing theoretical frameworks.

Definition and Overview of Organizational Identification

In a thoughtful review of the literature on social identity theory, Ashforth and Mael (1989) conceptualize organizational identification as a specific form of social identification. Identification is defined as "the perception of oneness with or belongingness to a group, involving direct or vicarious experience of its successes or failures" (p. 34). This is the definition of organizational identification adopted in this research.

Organizational identification can be viewed as a particular form of psychological attachment to an organization. It is related to, but not synonymous with the internalization of organizational goals and values. Hall, Schneider, and Nygren (1970) suggest that organizational identification is in fact "the process by which the goals of the organization and those of the individual become increasingly integrated or congruent" (p. 176).

Hall et al. (1970) explain that for some individuals the initial decision to work for an organization is influenced by the perceived match between personal and organizational values. When value congruence is a factor in the choice of an organization, individuals enter with a greater propensity to identify with the organization. Subsequent experiences then serve to either foster or inhibit the development of organizational identification.

This view is consistent with Ashforth and Mael's (1989) proposition that value congruence is both an antecedent and a consequence of organizational identification. They suggest

that perceived similarity promotes an enhanced sense of "belonging" to the group. This shared identity makes the goals and values of the reference group more salient, increasing the likelihood that the characteristic values and norms of the group will be internalized.

O'Reilly and Chatman (1986) also viewed internalization and identification as related, but conceptually distinct, constructs. Based on a review of the social psychological literature on identification and attitude change, they identified three possible bases for psychological attachment to an organization. Identification was conceptualized as involvement based on a desire for affiliation, and this form of attachment was differentiated from attachment predicated on congruence between individual and organizational values, and attachment based on compliance, or instrumental involvement for specific, extrinsic rewards (O'Reilly and Chatman, 1986, p. 493). When the authors factor analyzed a set of 12 items designed to measure these constructs, the overall pattern of results supported their conceptual distinctions. Furthermore, regression analyses indicated that internalization and identification were independent sources of variance in turnover intentions.

The three items loading on O'Reilly and Chatman's (1986) "identification" factor referred to pride in the organization, feeling a sense of "ownership" in the organization, and "talking up" the organization as a great place to work (p. 494). Pride in being part of the organization and feeling a "sense of belonging" were also used in the Hall et al. (1970) measure of identification.

Similar items were included in Meyer and Allen's (1984) "affective commitment" scale. The purpose of the Meyer and Allen scale was "to assess commitment characterized by positive feelings of identification with, attachment to and involvement in the work organization" (p.375). Specific items tap emotional attachment to the organization, feeling a "sense of belonging", and feeling as though the organization's problems are one's own. The Meyer and Allen (1984) scale is used to assess identification in this research because it has sound psychometric properties and it appears to reflect what Ashforth and Mael (1989) and others (Hall, Schneider & Nygren, 1970; O'Reilly & Chatman, 1986) have called identification.

Organizational Identification in the Army

The constellation of attributes characterizing military organizations suggests that a focus on organizational identification is especially appropriate in this setting. The military has a unique mission in society, and a distinctive, identifiable set of values (e.g., patriotism, "duty, honor, country"). Symbols (e.g., uniforms, rank), ceremonies, and

legends abound in the culture and are used to highlight the distinctiveness of the organization. New entrants into the military also undergo an intensive socialization process (e.g., pre-commissioning military science courses and basic training) emphasizing the importance of military values and traditions.

The existence of an identifiable organizational image and value system increases the likelihood that an individual can and will come to identify with the organization (Ashforth and Mael, 1989). The high level of organizational identification found among U.S. Forest Service employees in the early 1970's was attributed in large part to the unique mission and ideology of the organization (Hall et al., 1970). Similarly, the lower level of identification observed in the same organization 15 years later was attributed to changes over the intervening years that reduced the distinctiveness of the organization (Bullis & Tompkins, 1989).

Hall et al. (1970) also observed that when a career is uniquely associated with a particular organization (e.g., forest rangers, priests, military officers) the probability that the organization will become a focus of identification is increased.

Identification and Turnover Intentions

The literature on organizational identification and its impact on turnover is quite limited. Only one study has directly examined the effects of organizational identification on turnover and turnover intentions. In a small mixed sample of university employees, O'Reilly and Chatman (1986) found that identification with the organization was correlated with both intentions to remain with organization and actual turnover 16 months later. Moreover, identification was a predictor of intentions to leave even when value internalization and compliance measures were simultaneously included in the regression equation.

Indirect support for the identification/turnover relationship can also be inferred from data indicating that organizational identification is related to tenure among forest rangers and priests (Hall & Schneider, 1972). One would expect a positive relationship if individuals who do not identify with the organization tend to leave early in their careers. It must be noted, however, that the overall turnover rates in these organizations were relatively low, leading the authors to conclude that factors other than self-selection were primarily responsible for the observed identification/tenure relationship. Interestingly, tenure was not related to identification for organizationally mobile research and development professionals (Hall & Schneider, 1972). This finding was consistent with the authors' hypothesis that tenure would be more strongly associated with identification among employees in single organization careers.

Studies examining the relationship between turnover intentions and other measures of affective commitment lend additional support to the hypothesized linkage. In three different studies, measures of affective commitment (developed by the authors in each case to exclude the intentional components of the OCQ) were related to either turnover intentions or turnover behavior (Cook & Wall, 1980; DeCotiis & Summers, 1987; Werbel & Gould, 1984). The measure in the Werbel and Gould study incorporated items reflecting a perceived moral obligation to be loyal to the organization. This lends some support to the notion that there is a normative component underlying the influence of identification on propensity to stay.

Summary

In the present research it is hypothesized that individuals who more strongly identify with the organization will be more inclined to stay. The model posits that the effects of identification are independent of the effects of Army career prospects, work/family conflict, and years of service. Identification is also expected to operate differently from the other determinants in the model, influencing turnover decisions through psychological needs to maintain a coherent self-concept and conform to norms against leaving.

Empirical support for the hypothesized relationship between organizational identification and retention is based largely on evidence that affective commitment measures are consistently correlated with turnover intentions and behavior. It was argued, however, that theoretical considerations warrant the focus on a more clearly defined, theoretically grounded construct, and identification appears to be particularly relevant in settings like the military.

Anticipated Work/Family Conflict

Overview and Definition

Although research has confirmed the importance of satisfaction and commitment related variables in voluntary turnover, much of the variance in turnover decisions remains to be explained. Meta-analyses indicate that the mean weighted correlations between turnover and overall job satisfaction and organizational commitment are only a modest .25 and .36, respectively (Steel & Ovalle, 1984). The present model tests the additional contribution of work/family conflict.

Work/family conflict has not been a focus of attention in the civilian turnover research to date. In fact, family related considerations in general have been overlooked despite calls for the incorporation of non-work factors into turnover models

(Mobley et al., 1979; Schneider & Dachler, 1978; Steers & Mowday, 1981). Yet, the family cannot be easily ignored in the military. The military is a particularly "greedy institution," placing tremendous demands on soldiers and their families (Segal, 1986).

Military Career Demands and Retention

Military life is characterized by frequent relocations, both short and long term family separations, long work hours, unpredictable schedule and assignment changes, and "normative pressures on family members regarding their roles in the military community" (Segal, 1986, p. 16). These requirements place demands on spouses, as well as service members, and have important implications for the quality of life family members experience (Derr, 1979; Farkas & Durning, 1982; Grace & Steiner, 1978; Hunter & Shaylor, 1978; Jans, 1988; Orthner & Bowen, 1982; Wood, 1982).

Over the years, officers have consistently identified demands impinging on family life as the career attributes most likely to make them leave. In a large scale survey conducted in 1964, separations from family and isolated tours were identified by officers who stayed, as well as those who left, as the factors which would most influence them to leave the Air Force (Shenk & Wilbourn, 1971). In a sample of Army officers a decade later, family separations outranked even repetitive tours in Vietnam as an "influence to leave", and frequency of moves was the third most negative factor (Lund, 1978). Similarly, junior Naval officers presented with a list of 45 aspects of military life identified relocation frequency, family separations, and time with family as the most important reasons for leaving the military (Szoc, 1982). Furthermore, in the same study, officers intending to leave indicated that reducing the disruptions to family life (fewer/shorter deployments, regular 40-hour work weeks, fewer moves) would be more likely than changes in any other job conditions (including better pay and benefits) to make them stay (Szoc, 1982).

Perceived Work/Family Conflict and Military Retention

Although the objective demands of a military career are formidable, the results of several different studies suggest that the extent and frequency of specific demands have less impact on retention decisions than subjective perceptions of conflict or problems. Both Szoc (1982) and Jans (1988), for example, found that only reactions to separations (e.g., level of satisfaction, family stress, and perceived problems) not the number or duration of separations, were related to feelings about military life and career intentions.

Similarly, Farkas and Durning (1982) found that a subjective measure of work interference with family life was a strong predictor of family pressure to leave the Navy, which in turn predicted career intentions. Yet the subjective work/family conflict measure was only weakly ($r=.11$ to $.15$) related to time spent away from the family, the length of the typical work week, and number of hours per week with the spouse.

Results of a survey of over 600 Naval officers confirmed the importance of anticipated family outcomes (Neumann, Abrahams, & Githens, 1972). Officers who stayed in the military were much more likely than those who subsequently left to believe that they could attain a satisfactory family life in the Navy. In fact, there was only one item (likelihood of fully using one's abilities) in the combined set of intrinsic and extrinsic factors where differences between "stayers" and "leavers" were larger than they were for "a satisfactory family life".

Summary

The stresses of a military career appear to make work/family conflict an especially salient factor in military retention decisions. The data further suggest that the subjective experience of work/family conflict is not necessarily related to the extent or frequency of objective demands. The focus on anticipated conflict is consistent with the underlying assumption that officers tend to focus on future outcomes, rather than past or present conditions when they make career decisions.

Years of Service

Overview and Rationale

Early reviews of the literature identify tenure as a consistent correlate of propensity to stay (Mobley et al., 1979; Porter & Steers, 1973). Results in more recent multivariate studies, however, tend to be mixed. Dalessio, Silverman, and Shuck (1986), for example, dropped tenure from a revised version of the Mobley et al. (1978) model after testing the original model in five different samples. Yet others continue to find tenure effects even when variables like commitment and satisfaction are included in a model (Arnold & Feldman, 1982; Jans, 1988; Price & Mueller, 1981; Thompson & Terpening, 1983; Werbel & Gould, 1985).

Conceptually, it may be most productive to examine tenure effects in the context of what an employee's time investment represents in a particular occupational or organizational sample. Among relatively new employees, for example, tenure accounts for very little variance in turnover intentions (Rusbult & Farrell, 1983; Werbel & Gould, 1984). A fairly substantial time

investment may be required before tenure begins to affect career decisions.

Career stage and occupational differences may also be important. In some professions "job hopping" may be the norm and the primary means of advancement. In such cases, employees with more tenure may feel more pressure to move on than those with only one or two years in the organization.

Tenure-Related Investments in the Military

In the military, the effects of tenure on retention decisions are predictable, and in mixed tenure samples, at least, quite strong. Investment or "side-bet" models of turnover provide an explanation for these effects (Farrell & Rusbult, 1981; Meyer & Allen, 1984; Rusbult & Farrell, 1983).

Investment models build on Becker's (1960) proposition that individuals become bound to a particular course of action as a result of the accumulation of "side bets" reflecting investments in the organization. Interpreted broadly, "side bets" refer to "anything of value the individual has invested (e.g., time, effort, money) that would be lost or deemed worthless ... if he or she were to leave the organization" (Meyer & Allen, 1984, p. 373).

Investment in an organizational retirement plan may be a particularly salient investment. In the military, for example, individuals who complete 20 years of active duty service are eligible to retire at half of their regular active duty pay. Officers who leave the military prior to completing 20 years of service receive no retirement benefits. Obviously, as officers approach the 20-year mark, it becomes increasingly impractical, from an economic standpoint, to voluntarily leave the Army before retirement.

The military is also an organization that offers very specialized training and work experiences. Over time, officers develop skills and specialties that are valued internally, but not necessarily marketable in the civilian world. Time invested acquiring organizationally specific expertise is likely to be lost when the individual leaves the organization. When the costs of leaving the organization reach a certain level, employees may stay primarily to protect their investments.

Measures of "investments" or "continuance commitment" have predicted propensity to stay in two multivariate analyses (Meyer & Allen, 1984; Rusbult & Farrell, 1983). The measures used in these studies included a variety of factors, from time invested in retirement plans, to the lack of alternatives to the present job, to general perceptions of the hardships, sacrifices and costs that would be associated with leaving the present job

(Meyer & Allen, 1983; Rusbult & Farrell, 1983). This type of measure does not allow effects attributable solely to tenure to be identified, however, tenure is typically assumed to be associated with the accumulation of investments.

Pfeffer and Lawler (1980) offer an alternative explanation for the relationship between tenure and turnover intentions. In Pfeffer and Lawler's framework, tenure represents a behavioral commitment to the organization. Drawing on the social information processing model of attitude development (Salancik & Pfeffer, 1978) and the insufficient justification paradigm, a behavioral commitment to a course of action (i.e., remaining with an organization) is hypothesized to affect attitudes. Specifically, Pfeffer and Lawler argue that long-tenured employees need to justify their behavioral commitment to the organization. They do this by developing more positive attitudes toward the organization and devaluing the importance of extrinsic rewards when attractive alternatives are available. This line of thinking led Pfeffer and Lawler to hypothesize that the effects of pay and the availability of alternatives on turnover intentions would be non-significant or even negative among employees with the greatest tenure.

These main effect and interaction hypotheses were tested in a large sample of university faculty members. Results indicated that tenure was positively related to propensity to stay, and the effects of salary and perceived alternatives on propensity to stay were weaker for those with more tenure. The main effects of tenure were attributed to tendencies to become psychologically bound to a particular course of action (i.e., staying in the organization) as a result of past behavior. The interaction effects were interpreted as supporting the "weak form" of the insufficient justification hypothesis; individuals with the greatest behavioral commitment to the organization reconstruct the situation so that extrinsic rewards and alternative opportunities become less important.

Although the insufficient justification paradigm is intriguing, the investment model offers a simpler explanation for the observed effects. Alternatives and pay may be less important to the turnover decisions of tenured employees simply because the costs of leaving the organization are prohibitive. In other words, objective appraisals of investments rather than dissonance reducing strategies can explain both the main and interaction effects observed by Pfeffer and Lawler (1980). Jans (1988) argues that this is often the case in the military. Officers close to retirement very seldom voluntarily leave the military because few can afford to give up their retirement benefits.

These arguments imply that there is a point at which investments may become the dominant consideration, resulting in weak or non-significant relationships between attitudinal

variables and turnover intentions. Tenure is only likely to have significant moderating effects, however, in samples that include a substantial number of individuals who have significant investments in the organization.

Officers in the present sample are all in the early stage of their careers and only a small percentage (those with prior service) have served more than six years. Thus very few officers are expected to base turnover decisions on tenure-related investments alone; career prospects, identification and work/family conflict are expected to have similar effects across all tenure levels.

Summary

The variable years of service is included in the present model to tap the effects of time investments on turnover decisions. More time in the organization is associated with a greater investment in the retirement plan, and in many cases, the acquisition of organizationally specific skills. Rational assessments of the costs associated with sacrificing these investments are assumed to underlie the positive effects of tenure on propensity to stay. These effects are expected to be additive and relatively small, primarily because of the restricted range of tenure in the sample. Exploratory analyses will test the assumption that interactions among the direct determinants are not an independent source of variance in turnover decisions.

Literature Related to Indirect Determinants

Overview

In this section, the conceptual and empirical support for the antecedent linkages in the model is reviewed. Two variables in the model (person/branch match and current work satisfaction) are expected to influence propensity to stay only through effects on Army career prospects. One variable (inspirational leadership) is expected to affect retention intentions only through organizational identification. Two other antecedents (prior career orientation and operational support) are hypothesized to have effects on both career prospects and identification. Most importantly, none of the antecedent variables in the model is hypothesized to have direct, independent effects on propensity to stay.

There is little direct support in the turnover literature for the mediating effects proposed in the model. Tests of intervening variable models are still relatively rare, and most of the variables in the model have not been previously examined in the form proposed here. Therefore, much of the empirical

support for the antecedent linkages is only suggestive, based on research on the antecedents of organizational commitment or studies examining the direct effects of related variables on turnover.

In light of the primary focus on the sufficiency of the direct determinants, however, the lack of strong empirical support for the proposed indirect effects is not necessarily a weakness. A great number and variety of variables demonstrate bivariate correlations with turnover intentions or withdrawal cognitions. The present model posits that observed relationships between certain antecedent variables and turnover intentions are spurious, resulting from the failure to include key mediating variables. The inclusion of these antecedent variables allows a stronger test of the utility of the proposed direct determinants.

The discussion of the antecedent variables centers on (a) establishing that these variables are related to turnover intentions and/or are particularly relevant in military settings, (b) presenting any empirical data suggesting that the effects of these variables might be mediated by constructs similar to career prospects and identification, and (c) providing logical or conceptual arguments to support the hypothesized relationships.

Person/Branch Match

Overview and Rationale

There are 16 different basic branches in the Army, each with a different operational specialty (e.g., finance, infantry, aviation). Branch assignments are very important because they largely determine an officer's occupational specialty and Army career path. Officers are trained, promoted and given the majority of their assignments within their branches.

Branch assignments are made when an officer is first commissioned. Officer preferences are taken into account in the assignment process; however, Army manpower requirements take precedence. Therefore, a significant number of officers begin their careers in a branch they did not select. Mismatches may also occur even when officers get the branch they originally requested. Inaccurate or incomplete information about the various branches may lead to poor initial choices. In other cases, interests and aptitudes may change, producing person/branch mismatches at a later point in time. Schein (1978) notes that one of the critical tasks employees face in the early stage of their careers is to reassess their original decisions to pursue a certain type of work. Initial choices may be re-evaluated in light of the individual's developing "occupational self-concept" and the opportunities and constraints of the organization.

Opportunities for internal transfers must also be considered in attempts to assess person/job, or in this case, person/branch fit. Jackofsky and Peters (1983) suggest that individuals who are unhappy with their current job situation look for alternatives within the organization before they look for outside alternatives. If desirable alternatives are available internally, current dissatisfaction is less likely to translate into a decision to leave the organization. Jackofsky and Peters found support for this hypothesis when they included a measure of internal transfer opportunities in their test of March and Simon's (1958) Ease of Movement x Desirability of Movement turnover model.

Rationale for Hypothesized Effects

The person/branch match measure in this research reflects both current (as opposed to initial) branch preferences, and perceived opportunities to transfer into a more desirable branch. The hypothesis tested in the model is that a good person/branch match leads to more positive perceptions of the opportunities for a satisfying career.

The logic for this hypothesis is quite straightforward. Individuals try to choose work that will allow them to "fulfill their interests, meet their needs and express themselves" (Hall, 1976, p. 11). Branch preferences are assumed to reflect the perceived fit between opportunities available in a branch and the individual's occupational interests and aptitudes.

Occupational and organizational choice theories emphasize the importance of a good person/job or person/organization fit for overall career satisfaction (Hall, 1976; Schein, 1978). Assignment to a branch that is not compatible with occupational interests or goals should thus have a negative impact on perceived prospects for a satisfying career in the organization.

Stumpf and Hartman's (1984) results confirm the importance of person-job congruence for both satisfaction and, indirectly, turnover intentions. A path model specifying perceived person-job congruence ("this is not the right type of job for me") as an indirect determinant of turnover was tested in a small sample of recent college graduates. The results indicated that the effects of person-job congruence were mediated primarily by work satisfaction. Despite the substantial correlation between congruence and turnover intentions ($r = -.48$), person-job fit had no direct effect on intentions net of the effects of work satisfaction and organizational commitment. A similar model is proposed here. Specifically, person/branch match is expected to influence career prospects, but it is not expected to have any direct impact on propensity to stay once the effects of the direct determinants in the model are controlled.

Summary

In summary, an officer's branch largely determines his military specialty and the kinds of training and assignments he is likely to receive. The type of branch an officer prefers is presumed to reflect a desire for a particular kind of specialty or career. Consistent with models suggesting the importance of a good person/job match, it is hypothesized that officers not in (and not expecting to get into) their preferred branches will have less positive perceptions of their career prospects in the Army.

Current Work Satisfaction

Overview

Motowidlo (1983) observed that the relative predictive power of the different facets of job satisfaction seems to vary from one study to another. He further suggested that determining which particular facet will best predict turnover in any given situation is the central issue in turnover research. The focus in this research is on satisfaction with the work itself. Work satisfaction appears to drive overall job satisfaction, demonstrating much higher correlations with global satisfaction than other facets of the job (Ironson et al., 1989).

Work satisfaction is also a consistent and fairly large correlate of intentions to remain with an organization (Cotton & Tuttle, 1986; Mobley et al., 1979). Meta-analyses further indicate that work satisfaction is an even stronger correlate of turnover than overall job satisfaction (Steel & Ovalle, 1984).

Most models of the turnover process specify job or work satisfaction as a direct determinant of turnover intentions (e.g., Mobley et al., 1979; Price & Mueller, 1981; Steers & Mowday, 1981). In contrast, the model tested here proposes that the effects of current work satisfaction are indirect, mediated through perceptions of career prospects.

Rationale for Hypothesized Effects

The temporary nature of most job assignments is the primary reason current work satisfaction is not expected to directly influence propensity to stay. In professional level occupations, and perhaps most occupations, individuals hold a number of different jobs or assignments over the course of their careers. An assignment in an organization may last months or years, but it can generally be construed as a temporary stage in the career life-cycle. This is especially true in the military where job

rotation is the norm and officers can count on being reassigned every two to four years.

Opportunities for intrinsic satisfaction in the current assignment are expected to influence expectations regarding future satisfaction (i.e., career prospects). A challenging assignment may be construed as evidence that the organization values the individual. Intrinsically satisfying work may also promote confidence in the organization's ability to provide satisfying, developmental job opportunities in the future. However, because the current assignment is only temporary, and retention decisions have important long-term career implications, current satisfaction is expected to be much less important than perceived career prospects in directly determining turnover intentions.

One type of empirical support for this hypothesis comes from evidence that job satisfaction is related to attitudes toward and perceptions of one's career. Strong correlations have been observed between measures of career relevance and job satisfaction (Graen et al., 1973; Graen & Ginsburgh, 1977), career satisfaction and satisfaction with the work itself (Schneider & Dachler, 1978) and career prospects and job satisfaction (Jans, 1988). The direction of causality in this type of relationship has not been fully explored, however. These correlations can be interpreted as evidence that prospects for career satisfaction influence job satisfaction, or (as hypothesized here) that current satisfaction leads to more positive assessments of future outcomes. A third possibility is that the relationship is attributable to an external factor or common cause that simultaneously affects both job satisfaction and expectations.

The results of Motowidlo and Lawton's (1984) study support the directional hypothesis proposed here. In a large sample of first-term enlisted soldiers, Motowidlo and Lawton examined three different models of the possible relationships among job satisfaction, expectations about the present job, and expectations about civilian alternatives. To assess expectations, they had soldiers rate a list of 13 outcomes in terms of the likelihood that the event would occur (a) if they re-enlisted in the Army, and (b) if they left the Army. The outcomes included only factors that were clearly either favorable or unfavorable and had been identified in interviews as being important to re-enlistment decisions. Two types of satisfaction measures were also obtained. One was an 11-item summed index of satisfaction with various aspects of the job, and another was a measure of the extent to which soldiers perceived Army life to have desirable attributes.

Hierarchical multiple regression and path analyses were used to determine the best fitting model. Results failed to confirm the Mobley et al. (1979) hypothesis that job satisfaction and expectations have independent effects on turnover intentions. Current satisfaction influenced reenlistment intentions only through effects on expectations about future outcomes. Expectations regarding the current job were also stronger predictors of reenlistment intentions than perceptions of alternatives.

Motowidlo and Lawton's (1984) interpretation of the results was that present affective states may bias beliefs or expectancies about the future. It is not necessary to assume that affective bias is responsible for these effects, however. It is often noted that "the best predictor of future behavior is past behavior." Individuals who are treated poorly or underutilized in their current assignments may see no reason to believe that things will be different in future.

Hom, Katerberg, and Hulin (1979) also examined alternative models of the factors responsible for reenlistment decisions. In their research on Army National Guardsmen they contrasted commitment, satisfaction, and reasoned action (i.e., Fishbein-Ajzen) models of the determinants of the decision to reenlist. The commitment model was tested using an early version of the OCQ (Porter et al., 1974). The job satisfaction model included five job facet satisfaction measures and one organizational satisfaction item. For the test of the Fishbein-Ajzen model, subjective norms were assessed by having members indicate whether or not "people whose opinions are important to me and whose opinions I value think I should reenlist in the Guard at the next opportunity". Attitudes toward the act were measured by having members rate "reenlisting in the Guard at the next opportunity" on three semantic differential scales.

A comparison of the results of three separate regression equations indicated that the variables derived from the Fishbein-Ajzen model accounted for more variance in reenlistment intentions than the organizational commitment and job satisfaction measures.

Additional analyses tested the hypothesis that the effects of the other variables (e.g., work satisfaction) were mediated through more global attitudes toward the act of leaving and subjective norms. The correlations between the satisfaction variables and reenlistment intentions dropped sharply (e.g., from .55 to .19 for work satisfaction) when the effects of the Fishbein model predictors were partialled out, providing indirect support for mediational hypotheses.

Summary

The results of the two studies described above suggest that work satisfaction may not be an important predictor of turnover decisions when more global, future oriented measures are also included in a model. The findings thus provide indirect support for the hypothesis that the effects of current work satisfaction will be mediated through perceptions of career prospects. Logical arguments also suggest that current satisfaction should be less important in turnover decisions when, as in the case in the military, current assignments are known to be limited in duration.

A problem in sorting out the effects of current versus anticipated satisfaction in most research is the global nature of typical satisfaction and expectation measures. Ironson et al. (1989) point out that the more global or general the measure of job satisfaction, the more likely it is to tap long-term, as well as current, evaluations of the costs and benefits of the employment situation. In other words, global measures blur the distinction between present and anticipated outcomes. The context and time specific nature of the work satisfaction and career prospects measures used in this research should allow the independent effects of current and future oriented variables to be more clearly identified.

Prior Career Orientation

Definition and Overview

"Prior career orientation" reflects respondents' early, pre-entry career plans. The measure used here is retrospective, asking respondents to indicate to the best of their recollection if they were planning on or leaning toward a military or civilian career when they were (a) still in pre-commissioning training (i.e., USMA, ROTC); and (b) first commissioned as officers.

Results of several longitudinal studies show that measures of intentions and commitment obtained prior to, or immediately after entry are related to later turnover intentions and behavior. It is proposed here that these effects are not direct, but rather are mediated through intervening variables. Specifically, it is hypothesized that pre-entry career intentions influence subsequent turnover intentions only through effects on career prospects and organizational identification.

The hypothesis is based on (a) research and theory on the motives underlying initial organizational and occupational choices, and (b) arguments that the goals and values that determine initial intentions also affect organizational identification and subsequent perceptions of career prospects.

Prior Commitment/Intentions and Turnover

Several longitudinal studies have demonstrated that early, or pre-entry attitudes and intentions are remarkably stable over time. Research in civilian settings has focused on organizational commitment, and studies in military populations have examined the relationship between early and later intentions to stay in the military.

In two civilian studies of recent college graduates, organizational commitment measures were obtained on the first day with the organization (Porter, Crampon, & Smith, 1976) and after only one month on the job (Meyer & Allen, 1987). These early commitment measures were strongly related to subsequent measures of both commitment and turnover. Bateman and Strasser (1984) also found evidence for the stability of commitment over time; earlier commitment was the best predictor of commitment measured five and twelve months later. Furthermore, although commitment and job attitudes (e.g., satisfaction) were correlated within and across time periods, job attitudes had no apparent influence on subsequent commitment once the effects of prior commitment were controlled. In all three studies, then, early commitment to the organization was strongly related to later commitment.

The military literature in this area focuses more specifically on early expectations or intentions and later turnover intentions and behavior. In their research on Marine Corps recruits, Mobley, Hand, Baker, and Meglino (1979) asked recruits about to begin basic training whether or not they expected to complete the program. This variable was included along with a variety of satisfaction, expected utility, and desirability of alternatives measures in a regression equation to predict training attrition. Results indicated that the recruit's expectation that he would complete training was the best predictor of actual program completion. The results of the follow-up study were even more impressive. Youngblood, Mobley, and Meglino (1983) found that pre-entry intentions to reenlist for a second tour were a powerful predictor of actual re-enlistment decisions four years later.

Navy researchers (Bachman & Blair, 1976; LaRocco, 1983; LaRocco & Jones, 1980) have obtained similar results regarding the predictive power of early intentions and commitment. LaRocco and Jones (1980), for example, measured the reenlistment intentions of sailors when they were still quite inexperienced (they had less than six months of service and had never been to sea), and then again later after they had completed an eight to ten month deployment on a ship. Re-enlistment two to three years later was predicted almost as well by the early intentions as it was by intentions expressed after considerably more experience in the Navy.

Rationale for Hypothesized Effects

Prior career orientation and identification. Evidence that early attitudes and intentions predict subsequent retention have prompted military researchers to re-examine assumptions about the importance of situational determinants of retention decisions. Youngblood et al. (1983) concluded that "individual and anticipatory socialization differences exist prior to entry, ... and such differences predict turnover" (p. 514). In a similar vein, Bachman and Blair (1976) speculated that actual experiences in the military may be less important to retention decisions than "deeprooted perceptions and ideology related to the military life-style and mission" that exist prior to entry. Meyer and Allen (1987) also interpreted their results as confirming Mowday's (1982) hypothesis that individuals enter organizations with different propensities to become committed.

These interpretations are consistent with person-environment fit theories of organizational choice (Hall, 1976; Schein, 1978). Schneider and Hall, for example, have long maintained that individuals tend to select careers and organizations that are consistent with important facets of their identity (Hall, 1976; Hall, Schneider, & Nygren, 1970; Hall & Schneider, 1972; Schneider, 1987; Schneider, Hall, & Nygren, 1971). These authors, among others (Ashforth & Mael, 1989), further assert that individuals who select organizations on the basis of value congruence enter with a propensity to identify with the organization. This proposition is consistent with the results of their own research as well as the post hoc explanations others have offered for the stability of commitment and intentions over time (Bachman & Blair, 1976; Meyer & Allen, 1987; Youngblood et al., 1983).

In organizations like the military where there is a distinctive mission and ideology, self-selection on the basis of value congruence is particularly likely to occur (Ashforth & Mael, 1989; Hall et al., 1970). College students enrolled in ROTC, for example, are more likely than non-ROTC students to perceive the Army as a prestigious institution, view military service as a duty, and value the opportunity to perform as a leader (Gilbert & Wilson, 1983). Similarly, high school students who foresee a career in the military not only rate the military higher in terms of job opportunities and work conditions, they are also much more likely to have conservative, pro-military values (Bachman, Siegelman, & Diamond, 1987).

McAllister and Smith's (1989) results are also consistent with the value congruence model. Their survey of young officer cadets in the Australian Defence Force indicated that "institutional" reasons for joining the service (e.g., to do something worthwhile for my country, comradeship in the Defence Force) were strongly related to military values (e.g., duty must

come before personal interests, military service is a 24-hour-a-day responsibility). Both institutional reasons and military values were strongly correlated with expected years of service, or intentions to make the military a career.

In the present research, the hypothesized influence of prior career orientation on identification is expected to stem from the military or institutional values that lead some individuals to choose a military career in the first place. Both theory and research suggest that these values are relatively enduring and likely to foster subsequent identification with the military.

Prior career orientation and career prospects. The distinction between occupational and value congruence motives parallels the distinction military sociologists make between "occupational" and "institutional" orientations among service members (Moskos, 1977; Wood, 1982). Officers with an institutional orientation tend to see the military almost as a "calling" and endorse a host of values associated with the importance of military service and military traditions (Wood, 1982). In contrast, members with an occupational orientation tend to view military service as simply a job, and personal career goals and financial considerations tend to be more central to their career decisions than the "service ethic."

Although institutional values have been invoked most often as the factor responsible for pre- and post-entry military career intentions, instrumental and occupationally oriented motives should not be overlooked. As noted earlier, individuals also base entry decisions on the perceived fit between occupational interests and abilities and the career opportunities offered by the organization (Hall, 1976; Scheir, 1978).

The military offers some unique career opportunities; certainly some individuals join because they want to drive tanks, fire guns, jump out of airplanes, or procure weapons systems for a living. Assuming some stability in occupational goals, prior career intentions based on a desire for a uniquely military career should be positively related to subsequent perceptions of one's prospects for a satisfying career in the Army.

For others, military service is a means to an end rather than an end in itself. In exchange for a limited service obligation, soldiers can receive civilian educational benefits, as well as military training and leadership experience. Therefore, individuals with no desire to remain in the military often join because it is instrumental to their civilian career goals (Blair, 1975; McAllister & Smith, 1989). Blair (1975), for example, found that many high school students not interested in a military career would be willing to serve three to four years in exchange for financial assistance for college.

When an individual's pre-entry, or very early career plans reflect primarily instrumental motives for joining the military, it is reasonable to expect that for many, the preference for a civilian career will remain stable. When this is the case, the prior career orientation is expected to limit identification with the Army and produce less optimistic perceptions of one's prospects for a satisfying career in the military. In other words, the model proposed here suggests that the relationship between prior orientation and subsequent retention intentions is not direct, but rather is mediated by the two intervening variables in the model.

Summary

It is proposed here that the influence of prior career plans on subsequent career intentions can be captured by the two intervening variables in the model. Pre-entry career intentions are assumed to reflect personal values and occupational interests that in most cases, at least, are stable over the first few years in the organization. These underlying goals and values are expected to be responsible for the relationships expected between prior orientation and later career prospects and organizational identification.

When the values of the organization are the basis for the initial attraction, there is a greater propensity to identify with the organization. Thus early commitments influence subsequent propensity to stay, in part at least, through identification. When occupational or instrumental motives shape early plans, these same considerations should influence subsequent perceptions of the prospects for a satisfying career in the Army.

These hypotheses offer a mediational explanation for the observed effects of early commitment and intentions on later intentions. If prior career intentions are not related to career prospects and identification, assumptions about the stability of pre-entry values and career goals will be challenged. The lack of a relationship could also be explained by a marked change in pre- and post-entry perceptions of the organization (e.g., values and career opportunities). Should prior intentions exert direct, as well as indirect effects on propensity to stay, two interpretations suggest themselves. Perhaps, as Pfeffer and Lawler (1980) argue, and other studies suggest, commitment is self-maintaining (Batemen & Strasser, 1984; Meyer & Allen, 1987; Porter et al., 1976) and at least partly independent of organizational experiences and expectations. Another possibility is that pre-entry intentions are shaped by factors other than specific career goals and institutional values. Subjective norms, in the form of parents' wishes or friends' evaluations may influence early decisions, then lose their power or be replaced other reference group (e.g., family, peers) norms.

A problem with the test of this portion of the model is the retrospective nature of the prior orientation measure. There is no way to assess the extent to which faulty recollections or current attitudes and intentions have biased the measure. Bias stemming from current attitudes or turnover intentions is likely to inflate the correlations between these variables and the prior orientation measure. Therefore, even strong correlations between prior intentions and the intervening identification and career prospects variables can only provide weak support for the hypothesized antecedent effects. However, correlations between the retrospective and current career intentions measures should also be inflated if retrospective bias is a strong factor. Since the model predicts that prior intentions will not have independent effects on current intentions, the analyses can still provide a fairly strong test of the "no direct effect" hypothesis.

Operational Support

Definition and Overview

Operational support in this model taps perceptions that the organization is effective in providing the information, resources and feedback individuals require in order to perform their jobs effectively. It is proposed that the perceptions of operational support have a positive impact on both identification and career prospects. There is little direct support for the proposed effects of operational support. However similar variables (e.g., organizational dependability and effectiveness, appropriateness of policies and practices) have displayed positive relationships with commitment and satisfaction measures.

This particular variable was selected for inclusion in the model because operational support is expected to be particularly salient in military settings. In the Army there is a constant emphasis on "mission accomplishment". Even in peacetime the mission takes precedence over all else, however recent military operations (Operation "Just Cause" was launched in Panama one month before surveys were administered) are likely to have heighten the emphasis on mission accomplishment.

Individual performance is also constantly emphasized and evaluated in the Army. Yearly performance evaluations are the primary basis for promotion decisions, and just one poor evaluation can seriously limit training, assignment and advancement opportunities. Junior officers not selected for promotion to captain and major are forced to leave the Army.

The dual emphasis on mission accomplishment and individual performance is expected to "sensitize" officers to the support they receive from the organization. When the expected level of

operational support is not forthcoming, it is likely to be noticed, particularly if performance or mission accomplishment is affected.

DeCotiis and Summers (1987) invoked a similar "sensitization" concept to explain an unexpected result in their research on restaurant managers. Satisfaction with the time demands of the job had a stronger impact on organizational commitment than any other type of satisfaction, including overall job satisfaction. In explaining these results, the authors noted that this firm "had a published goal/value that stresses the importance of its employees having a life that balances work, social and family demands" (DeCotiis & Summers, 1987, p. 465). In reality, however, the organization demanded extremely long hours (averaging 65 hours per week) from its managers.

The authors suggested that the public emphasis on the balance between work and personal life sensitized employees to the time demands of the organization. The strong time demands/commitment relationship was attributed primarily to discrepancies between stated organizational values and the demands placed on employees.

Perceptions of Organizational Functioning and Commitment

Measures of organizational functioning somewhat related to the one proposed here were used in studies by Jans (1988) and Buchanan (1974). For his research on the careers of officers in the Australian Defence force, Jans (1988) developed an eight item measure ($\alpha=.72$) of "service effectiveness". Items tapped fairly global perceptions of organizational effectiveness, focusing on the level of morale in the organization, perceptions that units are well run, the sense of purpose in the organization, and the quality of the personnel management system and top level management. Multiple regression analyses indicated that service effectiveness was one of eight significant predictors of career involvement.

Buchanan (1974) developed an organizational dependability measure he described as reflecting the individual's perception that the organization had come through with promised rewards, and had done the things it said it would do for the individual. In Buchanan's sample and three subsequent samples where this measure was used, organizational dependability was a significant, independent predictor of organizational commitment (Meyer & Allen, 1987; Spencer & Steers, 1980; Steers, 1977).

Other studies have examined employee's perceptions of appropriateness of organizational policies and practices. Parasuraman and Futrell (1983) assessed satisfaction with company policies and support, in addition to satisfaction with the job, co-workers, supervision, pay, promotion and development. They

found that satisfaction with company policies and support was second only to satisfaction with the job in terms of the strength of the bivariate correlations with turnover intentions (.47 and .41).

In two other studies, attitudes toward company policies and practices were examined as antecedents of organizational commitment. In an unusual study of the referents of commitments in organizations, Reichers (1986) asked community service providers to report (a) what they thought should be done in a series of hypothetical situations, and (b) what they thought top management would say was the appropriate course of action. Results indicated that congruence between top management and employee judgements was related to organizational commitment.

Lee and Mowday (1987) tapped a similar construct. They asked employees from a number of different banks how consistent their bank's quality standards and operational procedures were with their own personal values and professional judgements. When organizational commitment was regressed on a very large set of potential predictor variables, the measure tapping consistency between organizational and personal standards emerged as the second strongest predictor.

In summary, variables reflecting perceptions of how the organization functions have demonstrated independent effects on commitment and turnover intentions in multivariate studies. Taken together, these studies suggest the plausibility of the operational support/organizational identification linkage in the model.

Explanation of Effects

One immediate consequence of the lack of effective operational support is expected to be frustration. In testing their work facilitation hypothesis, Peters and O'Connors (1980; Peters, O'Connors & Rudolph, 1980) found that inadequate resources led to greater frustration, stress and dissatisfaction. Jans (1988) extensive interviews with military officers confirmed that many officers become frustrated by what they perceive to be deficiencies in the quality of their service's management. Additional comments led Jans to conclude that when management deficiencies or incompetence affect officers personally by thwarting their personal effectiveness, career involvement (interest in and plans for a military career) tends to decline. When frustration mounts, individuals may try to psychologically distance themselves from the organization thereby reducing identification. Perceived discrepancies between stated values and the lack of support for the mission in practice may also contribute to lower levels of commitment (DeCotiis & Summers, 1987) or identification.

The hypothesized effect of operational support on career prospects is based largely on logic suggesting a possible relationship between operational support, individual performance, and promotability. An individual's ability to perform his job effectively is likely to be contingent on the level of operational support provided by the organization. If support is lacking, and performance is hindered by lack of information or resources, an officer's promotion prospects may be affected. In addition, perceptions that the organization is ineffective in supporting its members may lead to doubts about the organization's ability to utilize members effectively and provide appropriate assignments.

Summary

In the present research, the perceived level of operational support provided by the organization is proposed as an antecedent variable for two reasons. First, perceptions of organizational effectiveness are likely to be especially important in the military because of the constant emphasis on "mission accomplishment" and performance. Second, this variable is conceptually similar to related constructs (e.g., dependability, organizational support, organizational practices and policies) that have been empirically related to organizational commitment or intentions to stay.

Perceived operational support is expected to influence propensity to stay indirectly through effects on perceived career prospects and organizational identification. Evidence that variables like service effectiveness and organizational dependability are related to commitment suggests that organizational support is likely to influence identification. The proposed operational support/career prospects relationship is based on the argument that the lack of effective support may adversely affect performance, and hence lead to less positive expectations with regard to the promotability and career prospects in general.

Inspirational Leadership

Overview

The present model proposes that leadership plays an important role in the development of organizational identification. Specifically, it is hypothesized that exposure to an "inspirational" leader in the current assignment will be associated with a greater tendency to identify with the organization. This hypothesis is based on both theoretical propositions about the processes underlying identification, and the limited empirical literature addressing the role of leadership in relation to commitment and turnover.

In an important book on leadership, Bass (1985) attempts to expand current thinking about leadership beyond the traditional exchange and expectancy models of motivation. He contends that by thinking about leader-subordinate relationships primarily in terms of path-goal or cost-benefit models of influence we are missing some of the more important effects leaders can have on subordinates. Bass (1985) describes a type of "transformational" leadership observed in the "charismatic movers and shakers of our time" (p. 10). Charismatic or inspirational leaders "relate the work and mission of their group to strongly held values, ideals, and aspirations shared in common by their organization's culture...they paint for their subordinates an attractive picture of what the outcomes of their efforts could be" (p. 40). Bass goes on to say that through their influence, transformational leaders imbue work with a higher meaning, and arouse "enthusiasm, excitement, emotional involvement and commitment to group objectives" (p. 40). Inspirational leaders are thus expected to enhance the organizational identification of subordinates through the organizational values, norms, and vision they transmit. Ashforth and Mael (1989) suggest that the growing interest in symbolic management and transformational leadership in civilian organizations reflects in part, at least, the recognition that identification with the organization can occur through identification with a charismatic leader. The strong emphasis on motivational leadership in the Army also appears to reflect this assumption.

Research on Leadership and Turnover

As Graen (Graen, Liden & Hoel, 1982) observed, very few studies have explored the role of leadership in the turnover process. Typically, if leadership is addressed at all in turnover studies, measures of satisfaction with one's supervisor are simply correlated with turnover. This approach sheds little light on the types of leader behaviors that affect withdrawal decisions, and fails to address the possible mediating processes underlying leadership/turnover relationships. The perspective adopted by Graen and Ginsburgh (1977) suggests that employees are linked to their organizational roles through "leader-member exchange" relationships as well as the nature of their work. Specifically, employees in relationships characterized by mutual trust, attention, sensitivity and support are expected to be more attached to their organizational roles, and hence less likely to consider leaving the organization.

Two studies provide empirical support for Graen's model. In a sample of predominantly clerical employees (Graen & Ginsburgh, 1977) and a small sample of systems analysts and computer programmers (Graen, Liden & Hoel, 1982), the quality of the leader-member exchange relationship was an important predictor of turnover.

Krackhardt, McKenna, Porter, and Steers (1981) also found that supervisory interactions with employees were related to turnover. First, measures of supervisory support exhibited significant correlations with the length of time bank tellers intended to stay at the bank. Second, compared to branches in a control group, turnover rates were significantly lower in branches where supervisors implemented an experimental program of individual and group meetings with tellers.

Although these studies indicate that leader behaviors are directly related to turnover, there is also evidence that the effects of leader behavior on turnover may be mediated by organizational commitment. Michaels and Spector (1982) tested a causal model of the determinants of turnover. Their results indicated that (a) both job satisfaction and commitment had direct effects on intentions to leave; and (b) leader consideration had stronger independent effects on organizational commitment and job satisfaction than "met expectations" and the "motivating potential" of the job.

Bateman and Strasser (1984) found that measures of leader reward behavior were strongly related to concurrent measures of organizational commitment. In addition, crosslagged regression analyses suggested that leader punishment behavior had small significant negative effects on commitment measured five months later. DeCotiis and Summers (1987), on the other hand, found that none of their three measures of leader behavior (including consideration) were independently related to either commitment or satisfaction when more global perceptions of organizational climate were included in a regression equation.

Felt Importance and Commitment

Bass (1985) contends that one of the most important ways inspirational leaders "transform" subordinates is by increasing their self-confidence and imparting in them a sense of the importance of their jobs. Buchanan's (1974) research suggests that employees who feel that they are important to the organization are more likely to feel committed to the organization. Specifically, Buchanan asked managers from eight different organizations to indicate how important they felt they were to the organization. Multiple regression was used to examine the effects of "felt importance" and 12 other work experience variables on organizational commitment (defined as identification, involvement and loyalty). Results indicated that perceived importance to the organization was the best predictor of organizational commitment. In two subsequent multivariate studies, felt importance to the organization was also a significant, independent predictor of organizational commitment (Spencer & Steers, 1980; Steers, 1977).

These studies do not address Bass's contention that leaders play an important role in making employees feel more important. The results do, however, suggest a plausible explanation for how an inspirational leader might enhance organizational identification.

Summary

In summary, the present model proposes that inspirational leaders influence propensity to stay indirectly through effects on organizational identification. Results from several studies indicate that leader behaviors are often related to organizational turnover. In addition, there is also empirical evidence that leadership is related to organizational commitment. Taken together, these studies provide some support for the proposed model linkages.

Potential Determinants Omitted from the Model

Perceived Alternatives

A number of models include employee perceptions of alternatives as a factor likely to influence turnover decisions (e.g., Mobley et al., 1979). In models derived from expectancy theory, the focus tends to be on the quality of employment alternatives, or expectations regarding the positive attributes associated with alternatives. Typically the effects of evaluations of alternatives on turnover decisions are hypothesized to be additive and direct (e.g., Forrest et al. 1977; Mobley et al., 1979).

Other models focus on the perceived availability of alternatives and predict that outside opportunities interact with satisfaction (Jackofsky & Peters, 1983; Martin, 1979; Muchinsky & Morrow, 1980; Price, 1977; Rusbult & Farrell, 1983; Rusbult & Lowery, 1985) or intentions (Steers & Mowday, 1981) to determine turnover. In other words, dissatisfaction is expected to lead to turnover only if satisfactory alternatives are perceived to be available.

The explanations for these effects are intuitively appealing, yet measures of the availability or quality of alternatives have consistently failed to demonstrate the hypothesized independent or interactive effects (Arnold & Feldman, 1982; Bluedorn, 1982; Hom, Griffeth & Sellaro, 1984; Hulin et al., 1985; Michaels & Spector, 1982).

Multivariate studies in military settings also indicate that perceptions of alternatives explain little independent variance in turnover intentions. Steele (1987), for example, found that the probability of finding a good civilian job did not influence

retention intentions in any of the four occupational subgroups of Army and Marine Corps officers he examined. Schmidt (1982) obtained similar results in a sample of Naval officers; a measure of civilian job prospects was the least important and least consistent (across subsamples) predictor of career intentions of any variable in the model. Ashcraft (1987) found that perceptions of civilian job prospects had significant, but very small effects on retention intentions.

One reason for the unexpectedly small effects of perceived alternatives may be the lack of variance in perceptions. Wood (1982) noted that on the whole, officers with both military and civilian career orientations tend to have positive perceptions of their alternatives in the civilian employment market. This is apparent in ARI's 1988 survey of junior officers. Only 9% of the male officers indicated that it would be "difficult" or "very difficult" to "find a good civilian job right now considering both your own qualifications and current labor market conditions". None of the correlations between this variable and items reflecting propensity to leave, Army career prospects and feelings about the organization exceeded .11, and the mean correlation was less than .06.

Similar results were obtained in the 1985 DoD Survey of Officers and Enlisted Personnel (Griffeth et al., 1986). Responses to an item about civilian job prospects were nearly all positive, and not systematically related to career intentions. In fact, when the junior officer subsample was trichotomized on this variable, officers who reported the best prospects for a good civilian job were the most likely to intend to make the Army a career.

These latter results are consistent with Jans' (1988) observation that outside job opportunities may be a measure of the service member's value to the military as well as his value to potential civilian employers. In other words, the officers with the best civilian career prospects may also be the officers with the most promising careers in the military, confounding the effects of internal and external career opportunities. Wood (1982) offered another explanation for inconsistent effects. On the basis of interviews with junior Air Force officers, Wood concluded that external employment opportunities affect retention decisions only for the small proportion of officers with clearly technical/specialist, civilian career orientations. Limited civilian opportunities in particular specialty areas may constrain these officers to stay in the military. Other post hoc explanations for the lack of predicted relationships have also been offered. Some, for example, suggest that perceived alternatives operate by influencing perceptions of, or reactions to the current job (Hulin et al., 1985; Rhodes & Doering, 1983). An alternative explanation is that negative job experiences affect evaluations of alternatives. Employees who dislike their

present jobs may simply assume that other jobs are much better (i.e., "hope springs eternal..."); or employees determined to leave an organization may lower their standards so that a greater number of alternatives are deemed acceptable.

A study of Marine Corps training attrition (Mobley, Baker, Hand & Meglino, 1979) suggests the plausibility of this alternative explanation. Recruits who disliked the Marine Corps and subsequently left were more positive about their civilian job prospects than the recruits who completed training. The traditional explanation for this effect is that those who left were "pulled" away from their jobs by exceptionally good alternatives. In this case, however, recruits who left the organization had lower general aptitude scores than those who stayed, and were much more likely to be high school dropouts. With these dubious labor market qualifications, it is highly unlikely that the quitters left because of the attractive job opportunities available to them, but not the high school graduates who stayed. Negative experiences in the organization may have led those who wanted to leave to perceive anything outside the military as a relatively desirable alternative.

Other have suggested that we focus attention on concrete (i.e., job offers) instead of perceived alternatives. Real alternatives, in the form of specific job offers, may affect turnover (but not desire or intention to leave) by allowing those who are inclined to leave to act on their desires (Bowen, 1982; Hom et al., 1984). Typical measures of the quality or availability of alternatives may simply be too subjective or ambiguous to capture the effects of real labor market constraints and opportunities. If an employee has been actively searching for a job, perceptions of alternatives may reflect concrete opportunities. In other cases, however, positive perceptions may reflect wishful thinking, or the fact that the current job is unbearable and an alternative looks good. Further work on the operationalization and determinants of perceptions of alternatives is required before the role of this variable in the turnover decision process can be unravelled. In the meantime, an examination of the moderating effects of job offers on the turnover intentions/behavior relationship might be a fruitful avenue for future research.

Summary

In spite of the recent attention devoted to the role of perceived alternatives in turnover decisions, theoretically derived hypotheses about the role of perceived alternatives in turnover research have not been well supported. Revised, post hoc models, particularly those concerned with the effects of alternatives on intentions to leave are speculative at this point, and there is no clear empirical support for the independent, causal effects of perceived alternatives on turnover

intentions. The ambiguity surrounding the role of perceived alternatives in turnover research led to the decision to omit this variable from the model. For exploratory purposes, however, the additional variance explained by a single item measure of civilian opportunities will be examined.

Interactions Among the Direct Determinants

In the proposed model, the effects of the direct determinants are presumed to be additive. No moderating effects are proposed, and the interaction terms implicitly hypothesized to be non-significant could be viewed as potentially relevant omitted variables.

Tenure is the most plausible source of interaction effects. As noted earlier, the effects of attitudinal variables on propensity to stay may be much weaker when tenure related investments (i.e., "golden handcuffs") bind employees to the organization. Given the restricted range of experience in the present sample, however, tenure is not expected to have significant moderating effects.

Conceptual arguments for the plausibility of other interaction effects could also be advanced, and in fact are implied in explanations of some of the proposed effects. For example, career prospects may have stronger effects on retention decisions when identification is low. However, most efforts to find empirical support for logically deduced interactions are unsuccessful, and at this point, there is no empirical basis for positing interaction effects. Nevertheless, exploratory tests for interactions are appropriate and included in the preliminary analyses.

Model Specification and Research Design Issues

The Unmeasured Variable Problem

A critical assumption in path analysis is that the residuals of the variables in a causal path are not correlated. James (1980) observes that

"this assumption implies that the causal variables in a theoretic path equation should be unrelated to unmeasured causes of the dependent endogenous variable in as much as the unmeasured causes are included in the error term" (p. 416).

If an important causal variable has been left out of a causal chain, the estimates of the path coefficients will be

biased. This is what is referred to as the unmeasured, or omitted variables problem.

In his discussion of the unmeasured variable problem in path analysis, James (1980) notes that this problem cannot be completely solved because we can never be sure certain that all the relevant causes of an endogenous variable have been identified. He observes that:

"Consequently, the operative question is not whether one has an unmeasured variables problem but rather the degree to which the unavoidable unmeasured variables problem biases estimates of path coefficients and provides a basis for alternative explanations of results" (James, 1980, p. 415).

James goes on to identify the conditions under which the unmeasured variable problem is not likely to be a significant source of bias. He points out first, that from a practical standpoint, if an unmeasured variable is only a minor cause of the dependent variable bias is not likely to be serious. Second, an unmeasured cause must be correlated with a measured cause for bias to result. Yet if the correlation is either very small or very high, the biasing effect is not likely to be serious. A very high correlation between an unmeasured cause and a measured cause suggests that the unmeasured cause is either redundant with, or linearly dependent on the measured cause. When this is the case, the unmeasured variable is unlikely to make a unique contribution to the prediction of the dependent variable, therefore will not seriously bias path coefficients of the measured causes. Similarly, a trivial cause will not account for enough variance in the endogenous variable to be a significant source of bias.

There is no simple way to avoid excluding relevant causes in a model. Practical constraints and goals of parsimony and elegance in scientific theory preclude simply incorporating every conceivable causal factor in causal models. Efforts to identify and eliminate possible causal factors through logic, however, are clearly warranted. The rationale for excluding perceptions of alternatives was presented earlier. Further arguments for the sufficiency of the variables in the present model are presented below.

Arguments for the Sufficiency of the Proposed Model

In the development of the officer career decision model, an effort was made to either control for or include variables likely to make an independent, nontrivial contribution to the criterion variable, propensity to stay. The direct determinants in the model were proposed because they appear to tap the critical

components of variables that often predict turnover intentions or behavior.

The career prospects variable, for example, captures the expected utility (for career satisfaction, at least) of staying in the Army. The operationalization of the construct includes both advancement prospects and intrinsic satisfaction, outcomes shown in previous research to be important when individuals make career decisions.

The organizational identification scale measures what is hypothesized to be the most critical of the emotional or psychological bases of attachment to an organization. Related constructs like value congruence or involvement are likely to be so highly correlated with identification that their omission will not be a serious source of bias. More global, multidimensional constructs like organizational commitment are likely to be a linear function of several of the more specific measures in the model, hence redundant.

The third direct determinant of propensity to leave, anticipated work/family conflict, is typically not included in turnover models. Therefore, the inclusion of this variable in the present model may correct an "unmeasured variable" problem in the current turnover literature. If family conflicts influence turnover decisions, and at the same time are correlated with job attitudes, previous estimates of the effects of job and organizational variables may have been inflated.

Years of service in the military reflects tenure-related investments. Years of service is also strongly correlated with age in the military because, with rare exceptions, new entrants to the organization are all young. Age is therefore not expected to be an independent source of variance in propensity to stay. Other potentially important demographic factors (e.g., gender, marital status and educational level) are controlled in this research.

The antecedent variables in the model will allow the potential importance of five additional classes of factors to be examined. If variations in affective reactions to the immediate job, perceptions of the organization, experiences with supervisors, person-job fit, and pre-entry plans or values directly affect turnover intentions, their effects should be captured by the antecedent variables in the model. The analysis strategy, which includes estimating the direct effects of all variables in the model on propensity to stay, will reveal whether or not the antecedent variables are more appropriately conceptualized as direct determinants.

Summary

In summary, the present model includes variables from each of the major categories of determinants identified in the turnover research. Different operationalizations of variables reflecting perceptions and attitudes in the areas of work, organization, career and family are likely to be strongly correlated with, and hence largely redundant with the measures specified in this model. Variables measuring perceived alternatives are omitted from the model because they typically add little explanatory power to turnover intention models and the source of these perceptions is unclear. The lack of empirical support for moderating effects also led to the decision to omit interaction terms from the model. The effects of these omitted variables will be examined in exploratory analyses, however.

Sample Restrictions

Daleessio, Silverman and Schuck (1986) recently suggested that "more attention should be given to possible differences in the turnover process among members of different occupations or groups within the organization" (p. 257). In designing the present research, possible group differences were an important consideration. Although Army officers are a fairly homogeneous group in some respects, there are several personal and military characteristics that might influence the retention decision process. For example, men and women, married and single officers, and officers in the early and later stages of their careers are likely to consider different factors, or weight factors differently when they make decisions about staying in the Army. Accordingly, the proposed model was developed for and is tested on a specific subgroup of Army officers - married, male, basic branch officers in the early stage of their careers. Once the utility of the model is assessed in this particular group, future research can focus on assessing the generalizability of the model across different groups. The rationale for the sample restrictions are provided below.

Branch Restrictions

The branch restriction limits the sample to officers currently assigned to one of the Army competitive branches (i.e., combat arms, combat support, combat service support branches). The small percentage of officers in special branches (e.g., doctors, lawyers, nurses, and chaplains in the Medical Corps, Judge Advocate General Corps, and Chaplain Corps) were excluded from the analysis sample because of their markedly different backgrounds and career paths.

Gender

Different factors may also be important for female officers because of the unique family pressures and career constraints they are likely to face. Women in the Army, for example, are excluded from the combat arms branches, and hence have fewer opportunities for important leadership positions. Most importantly, however, the majority of married female officers have spouses who are also in the military (Teplitzky et al., 1988). The present model is not designed to address the unique set of career and family complications (e.g., incompatible specialties, joint domicile, child care in the event of deployment) that might influence the career decisions of officers in dual military career marriages.

Marital Status

The exclusion of single officers was designed to allow the importance of family factors to be assessed. Although single officers may anticipate work/family conflict if they remain in the Army, family considerations are likely to be most salient for officers who are currently married. The focus on married officers is also consistent with the Army's efforts to understand the implications of the changing demographic composition of the Army. Young soldiers are more likely than ever before to be married, and the impact of family considerations on retention decisions is a major concern of Army policy makers.

Career Stage

The sample is also limited to officers who are still in the early stage of their careers, specifically officers who were commissioned two to six years ago (1984 through 1987). This restriction is important for both theoretical and practical reasons. First, inexperienced employees have little basis for their assessments of the organization. Their attitudes may reflect immediate reactions to temporary situations, or global impressions formed prior to entry. The attitudes and perceptions of the respondents in this sample, however, are based on at least two years of experience, and thus are likely to be more accurate, stable, and differentiated. Once attitudes have crystallized, one can have more confidence that observed effects are stable and attributable to actual experiences in the organization, rather than pre-entry expectations.

The career stage of the analysis subsample also makes this group an especially appropriate sample for a test of a turnover or career decision model. Most officers in these year groups are approaching or have just reached the point at which they are first eligible to leave the Army (i.e., the end of their three, four, or five year active duty obligations). Officers near the end of their obligations are likely to have started thinking

about what they will do once they are free to leave. At the same time, officers who have completed their obligations are not likely to have dismissed the possibility of leaving solely because of the time they have invested toward retirement. This should allow the determinants of voluntary, relatively unconstrained retention decisions to be more clearly identified. In mixed tenure samples, the effects of career, organizational and family factors on junior employees may be obscured by the overwhelming importance of economic factors for the more senior employees (Jans, 1988).

There may also be differences in the way employees who are heavily invested in an organization evaluate and respond to work experiences. Some theorists (O'Reilly & Caldwell, 1981; Pfeffer & Lawler, 1980; Salancik & Pfeffer, 1978) argue that commitment to a course of action may influence subsequent attitudes. If this is the case, even statistical controls for the effects of tenure or investments on turnover decisions will not allow unambiguous interpretation of the causal effects of noneconomic factors.

Practical Considerations

A final research design consideration is a practical one. Officers commissioned between 1984 and 1987 are still in the critical "retention window". These officers are the logical target for Army force management strategies, whether the goal is to encourage or discourage the retention of certain types of officers. With the current and projected force reductions, the career decisions of these officers will largely determine if the Army falls short of, meets, or exceeds its reduced requirements for captains and majors in the years ahead. Testing the proposed model on a subpopulation that is easily identifiable and meaningful from a force management perspective should increase the utility of the results for Army leaders.

Summary and Central Research Questions

Over ten years ago, Schneider and Dachler (1978, p.3) observed that:

"The limited and frequently confused understanding of organizational participation and withdrawal may well be the result of having looked for determinants of these behaviors only within the narrow context of isolated work or individual difference variables".

The situation has improved since 1978. Contemporary turnover researchers include a broader spectrum of variables in their analyses and are increasingly likely to test multivariate models of the turnover process. At the same time, however, the

more holistic approach to turnover research advocated by Schneider and Dachler (1978) has not been widely adopted. Schneider and Dachler conceptualized turnover as a response to a multi-dimensional affective state and suggested that one's long-term work career and extra-work (primarily family) environment might be as important as the immediate work environment in determining an individual's propensity to leave an organization. This broader perspective on the antecedents of turnover has guided the development of the model proposed in the present research.

Another important consideration in turnover research is the nature of the psychological processes or motivational forces implied in the specification of variables (Weiner, 1982). Accordingly, an effort was made to identify different types of underlying processes and ensure that effects due to affective reactions, instrumental motivations and normative pressures can all be captured by variables in the model.

The theoretical model proposes that an officer's propensity to leave the Army is a direct, additive function of perceptions of career prospects, identification with the organization, anticipated work/family conflict, and years of service. The rational decision processes implied in the expectancy theory framework (e.g., Mobley et al., 1979) are assumed to underlie the effects of career prospects and years of service on propensity to stay. Organizational identification, on the other hand, is assumed to influence propensity to stay through more subtle, psychological needs and processes, including needs to preserve one's self-esteem and maintain a coherent self-concept. The effects of work/family conflict on retention decision may stem from both the implied costs of conflict for families, and the desire to comply with norms surrounding an individual's family roles. The differential effects of the direct determinants may point to the relative importance of different psychological processes in turnover decisions.

The model also includes variables expected to have only indirect effects on propensity to stay. The effects of person/branch match, current work satisfaction, prior career orientation, operational support and inspirational leadership are hypothesized to be mediated through perceptions of Army career prospects and/or organizational identification.

The primary questions addressed in this research can be summarized as follows:

1. Do the variables in the model account for a significant, and practically important, proportion of the variance in propensity to stay?

2. Do the four variables proposed as direct determinants of propensity to stay have significant independent effects on the dependent variable?

3. Do the two intervening variables in the model mediate the effects of the five antecedent variables, or do these variables have direct, independent effects as well?

The first and second research questions basically address the utility of the constructs proposed as direct determinants of propensity to leave. The third question addresses the validity of the proposed causal linkages from the antecedent to the endogenous variables in the model. Path analysis is used to examine the predictive utility of the direct determinants in the model and the validity of the hypothesized indirect causal linkages in the model.

The test of the present model is expected to contribute to literature on both military retention and organizational turnover in general, by suggesting the relative importance of career, organizational, and nonwork factors in retention decisions. At a broader level, the results of this research may suggest the appropriateness of developing integrated turnover models that simultaneously consider the effects of: (a) utility expectations with respect to both economic factors and long-term career goals, (b) anticipated family costs of staying in a particular job or organization, and (c) one's social self-concept and both internal and external norms related to organizational membership.

METHOD

Sample and Procedure

The sample for this research consists of a subset of the officers surveyed in December, 1989 for the Army Research Institute's Longitudinal Research on Officer Careers (LROC). The sampling strategy was based on procedures used for the first LROC survey in 1988.

LROC Sampling Strategy

For the 1988 sample, individuals in the target population were identified from records in the Officer Master File - the personnel database maintained by the Army. The target population consisted of active duty Army officers commissioned between 1980 and 1987 from either the Reserve Officers' Training Corps (ROTC) or the United States Military Academy (USMA) at West Point. A stratified random sampling approach was adopted to ensure adequate sample sizes for subgroup analyses of USMA and female officers. The target number of USMA and ROTC male and female officers were randomly selected from the population of officers within each commissioning year group. Approximately 1000 officers were selected from each year group.

The 1989 LROC sample included all of the officers from the 1988 sample who were still in the Army, plus additional, randomly selected officers within each stratum (e.g., ROTC males commissioned in 1980) to replace those who had left the Army. The final target sample consisted of just over 1000 officers per year group (1980-1988).

1989 LROC Survey Administration Procedures

Mailing labels with current home addresses were obtained from the Military Personnel Center in October, 1989. Survey packets were mailed to officers' homes during December 1989 and January 1990.

Each survey packet included a machine scannable survey booklet, a return envelope, instructions for returning the survey, and cover letters from the Commander of the Army Research Institute (ARI) and the Deputy Chief of Staff for Personnel. The letters summarized the overall objectives of the research project, encouraged voluntary participation and guaranteed that individual responses would be held in strict confidence. Respondents were asked to use the envelope provided to return the survey directly to the civilian contractor responsible for survey distribution and data base management.

In April, letters with updated addresses went out to all officers who had not yet responded. The letter stressed the importance of representative data and asked officers to please complete the survey or notify the contractor (using the postcard provided) if they needed another survey. Over 500 second surveys were mailed out, mostly to officers who indicated that they had never received the first mailing.

By the end of May 1990, the survey cut-off date for this set of analyses, 4900 surveys had been entered into the database for an overall response rate of 47%.

1989 LROC Sample and Population Comparisons

Population statistics for officers in the 1984-1987 year groups (those still on active duty as of the end of fiscal year 1989) were examined to determine how the composition of the sample differed from the population. Table 1 shows the breakdown of ROTC and USMA male officers by year group in the population, the LROC target sample (i.e., officers who were mailed surveys), and the final 1989 respondent sample.

ROTC respondents comprised 6% (n=755) of the ROTC male officer population in the 1984-1987 year groups. The overall response rate for ROTC officers was 42%, with only minor variations across year groups.

For USMA males, response rates ranged from a low of 36% in 1986 to a high of 43% in 1984, with an overall response rate of 39%. The 500 USMA respondents represent 15% of all USMA males in the 1984-1987 year groups.

The most notable difference between the population and the final LROC sample is the overrepresentation of officers commissioned from USMA. USMA officers comprise 40% of the 1989 LROC sample, but only 21% of the population of officers in the 1984-1987 year groups. In light of this discrepancy and the demographic and military differences associated with USMA and ROTC commissions, exploratory analyses were conducted to see if the variables in the model operated differently in the two groups.

Final Analysis Sample

There were a total of 757 officers in the LROC 1989 sample who met the criteria for inclusion in the sample for this research. All married, male, 1984-1987 USMA or ROTC graduates in one of the basic branches were included in the analysis sample. The USMA (41%) versus ROTC (59%) split in the analysis sample is nearly identical to that in the total LROC 89 sample. The ROTC group includes 25% of the total sample who were ROTC scholarship recipients and 34% who were ROTC non-scholarship officers.

Table 1

1989 IROC
Population and Sample Statistics for
ROTC and USMA Male Officers by Year Group

<u>ROTC Male Officers</u>							
Year Group	Population FY89		Target Sample		Respondent Sample		Response Rate
	N	%	N	%	N	%	%
1984	2738	23%	505	28%	200	26%	40%
1985	2853	24%	421	23%	176	23%	42%
1986	3056	26%	417	23%	180	24%	43%
1987	3246	27%	455	25%	199	26%	44%
Totals	11893	100%	1798	99%	755	99%	42%

<u>USMA Male Officers</u>							
Year Group	Population FY89		Target Sample		Respondent Sample		Response Rate
	N	%	N	%	N	%	%
1984	617	19%	276	21%	120	24%	43%
1985	844	26%	330	26%	128	26%	39%
1986	890	27%	352	27%	128	26%	36%
1987	898	28%	328	25%	124	25%	38%
Totals	3249	100%	1286	100%	500	101%	39%

Note. USMA Officers = 21% of population, 40% of sample;
1984-85 Year Groups = 47% of population, 50% of sample.

Just over half of the officers in the sample were captains (52%) and the remainder were first lieutenants. Almost two thirds (64%) of the officers are in combat arms branches, with 25% in combat support and 11% combat service support branches.

In terms of year groups, the analysis sample has a higher percentage of officers from the 1984 year group (29%) than either the population or the total LROC sample. This is largely due to the fact that a higher percentage of officers in the earlier year groups are married and thus eligible for inclusion in the analysis sample.

The large majority of officers (79%) had been in the Army for three to six years; only 9% had more than six years of active duty service. Approximately one fourth had completed their active duty service obligations (almost all within the past year), and close to one third had less than one year remaining in their obligations.

With respect to personal characteristics, the analysis sample consists largely of 25 to 29 year olds (82%). The mean age is 27. All of the officers are college graduates, and almost 20% have had at least some graduate level work. Just under half of the officers in the sample (47%) have children, and 16% are expecting a child.

The wives of these officers are well educated, and typically plan on pursuing their own careers. The majority of the wives (56%) had college degrees, and all but 14% of the officers said that their wives planned to get additional education. Although only 38% of the wives were currently working full-time, fully three fourths of the officers said that their wives had long-term plans for a career (as opposed to plans for just occasional jobs or temporary work). Fourteen percent (14%) of the officers had wives who either were (5%) or still are in the military (9%).

Of the 757 respondents, complete data were available on all model variables for 714 (93%) of the officers. This sample of 714 officers was used in the test of the model.

Measures

With the exception of "years of service", multi-item a priori scales were proposed for each variable in the model. In some cases, items or entire scales were used in the 1988 LROC survey. Other items and scales are new, and were included in the 1989 survey specifically to measure constructs in the career decision model. When reliabilities (Cronbach's alpha) are available for a comparable subgroup from the 1988 survey they are reported in parentheses. The exact wording of each item can be found in Appendix A.

All scales used in the analyses are composites created by simply averaging responses to the component items. Negatively worded items were recoded before item analyses were conducted and scales were computed. Items were also recoded where necessary so that higher scores on all scales reflect "more" or a higher level of the construct. For example, higher scores on Propensity to Stay reflect a stronger probability of staying, whereas higher Conflict scores indicate greater anticipated conflict.

Dependent Variable

The propensity to stay scale consists of two items: intentions with regard to leaving the Army, and plans for a military versus civilian career. The items, response alternatives, and response frequencies are shown in Table 2. Responses to the two items were averaged to obtain scale scores. For the six officers with missing data on one of the two items (no one had missing data for both items) propensity to stay was measured using the single item for which there was a valid score.

Scores on propensity to stay ranged from 1 to 5.5 (higher scores reflecting a stronger propensity to stay), with a mean of 3.72 and a reliability of .93 (LROC 1988 reliability was .92). The distribution of scale scores is somewhat skewed (.53) because of the high proportion of officers intending to make the Army a career.

Indirect Determinants of Propensity to Stay

Person/Branch Match. A dichotomous person/branch match index was constructed from items asking what branch the officer is currently in, what branch he would like to be in, and whether or not he intends to, and expects to be able to transfer into a more desirable branch. A score of "1", indicating a good person/branch match was assigned if the officer was either in the branch he wanted or expected to get into that branch. The 34 officers with missing data on any of the three items used to construct the index (31 officers failed to indicate what branch they would like to be in) were also assigned the modal value "1". All other officers were assigned a score of "0". Sixty-five percent (65%) of the officers were either in, or expecting to get into (8% of the total) their preferred branch.

Prior Career Orientation. The prior career orientation measure consists of two items asking about career plans at two earlier points in time. Respondents were asked to use the 5-point "planning on an Army career" to "planning on a civilian career" response scale to indicate, to the best of their recollection, what their plans were before they began pre-commissioning training (i.e., USMA or ROTC) and when they were first commissioned. The mean for these two items was 3.77, indicating that most officers had been planning on an Army career. The reliability for these two items was .83 (1988 LROC alpha=.85).

Table 2

Frequency Distributions for the Two Propensity to Stay Items

1. Which of the following best describes your current career intentions?

	N	%
(6) Plan to stay in the Army beyond 20 years	165	21.8%
(5) Plan to stay in the Army until retirement at 20 years	175	23.5%
(4) Plan to stay in the Army beyond my obligation but am undecided about staying until retirement	192	25.4%
(3) I am undecided whether will stay in the Army upon completion of my obligation	67	8.9%
(2) I will probably leave the Army upon completion of my obligation	69	9.1%
(1) I will definitely leave the Army upon completion of my obligation	84	11.1%
Missing	2	.3%
TOTAL	757	100%

2. Right now I am ...

	N	%
(5) Planning on an Army career	241	31.8%
(4) Leaning toward an Army career	154	20.3%
(3) Undecided	132	17.4%
(2) Leaning toward a civilian career	90	11.9%
(1) Planning on a civilian career	136	18.0%
Missing	4	.5%
Total	757	100%

Current Work Satisfaction. Four items were used to measure satisfaction with the nature of the work in the officer's current assignment. One item is a global work satisfaction measure ("How satisfied are you with the kinds of work you do in your current assignment?") based on a 5-point satisfaction scale. The other three items ask respondents to use a 5-point "very good" to "very poor" scale to rate opportunities for intrinsic work satisfaction (learn/develop skills, do interesting work, exercise initiative) in their current assignment. The mean of 3.83 indicates that most officers find their current work assignments satisfying, interesting and developmental. The reliability of the scale was .84 (1988 LROC alpha with only the last three items was .83).

Inspirational Leadership. The measure of inspirational leadership was designed to reflect the "inspirational" qualities of the best leader in the officer's current assignment. Five items on the Multifactor Leadership Questionnaire (Bass, 1985) with high loadings on the "charismatic" or "inspirational" leadership factor were adapted to describe inspirational leadership in this research.

After identifying the "best" leader in their current assignment (e.g., rater, senior rater, NCO, officer not in their chain of command), respondents were asked to indicate how often (5-point "always" to "never" scale) this leader inspires enthusiasm, loyalty, and trust, and helps others understand the unit mission and the Army's goals.

Not surprisingly, the mean for the inspirational leadership scale was quite high (4.30) and the distribution was markedly skewed. Only the "best" leader in the current assignment was evaluated and this leader was typically characterized as "always" or "usually" able to inspire and help people. The reliability of this scale was .84.

Operational Support. The operational support items ask respondents to indicate how effective (5-point "very effective" to "very ineffective" scale) the Army is in providing various types of management and operational support. The seven areas evaluated include organizational support, communication channels, information resources, materiel resources, personnel resources, feedback on duty performance, and recognition for a job well done.

Prior evidence that employees tend to form global impressions of organizations with respect to support (Eisenberger et al., 1986) and effectiveness (Jans, 1988) suggested that these items would form a single factor. The feedback and recognition items displayed lower overall item-total correlations than others in the set, however, their inclusion increased the internal consistency of the scale ($\alpha=.80$). The mean (3.27) suggests that officers are neutral to somewhat positive in their evaluations of the operational support the Army provides.

Summary. Scale statistics and intercorrelations for the five proposed indirect determinants of propensity to stay are presented in Table 3. All a priori items for these scales increased the internal consistency of the measures, thus all were retained. Scale reliabilities were high, ranging from .80 to .84, and means were all above the midpoints of the scales, reflecting generally positive Army attitudes and experiences.

The indirect determinants are not strongly correlated. Only two correlations exceed .20; work satisfaction exhibits correlations of .36 and .24 with operational support and inspirational leadership. Prior career orientation is not related to the other antecedent variables.

Direct Determinants of Propensity to Leave

A priori scales were proposed for three of the four variables hypothesized to be direct determinants of propensity to stay (years of service is a single item measure). However, because of the centrality of these variables in the model, the common response format for the items, and uncertainty about the empirical distinctiveness of the constructs, factor analyses were conducted prior to final scale construction.

Table 3

Scale Statistics and Intercorrelations for
Indirect Determinants

	N	Mean	SD	1	2	3	4	5
1. Branch Match	757	.65	.48	---				
2. Work Sat.	749	3.83	.87	.17	(.84)			
3. Prior Orient.	755	3.77	1.05	.04	.02	(.83)		
4. Op. Support	752	3.27	.61	.18	.36	-.01	(.80)	
5. Insp. Ldrship	743	4.30	.58	.03	.24	.02	.13	(.84)

Note: Scale reliabilities (Cronbach's alpha) are on the diagonal, correlations over .10 are significant at $p < .01$.

The a priori item sets and the final scales constructed on the basis of the factor analysis are described below. The factor analysis results and decision rules for dropping items are reported in the first part of the Results section. Item names are included in parentheses below to facilitate reference to the factor analysis tables.

Career Prospects. The proposed career prospects scale was designed to tap expectations regarding promotion opportunities and the likelihood of getting career enhancing and satisfying assignments should the officer decide to pursue an Army career. The one global satisfaction item (5-point "very satisfied" to "very dissatisfied" scale) reads: "All in all, how satisfied are you with your career prospects in the Army?" (CARSAT). The other six items are more specific and perceptual in nature. Opportunities for advancement in the officer's branch (OPPADV) are assessed using a 5-point "excellent" to "very limited" scale. A scale ranging from "I'd have a strong advantage" to "I'd be at a strong disadvantage" measures how competitive officers believe they are with regard to promotions and schooling opportunities (HOWCOM).

The four remaining items employ a 5-point "strongly agree" to "strongly disagree" response scale. These items address the officer's confidence or belief that he will (a) be promoted as high as his ability and interest warrant if he stays in the Army (AGHIGH); (b) get the kinds of assignments he needs in order to be competitive for promotions (AGASGN); (c) get assignments that match his skills and interests (AGSKIL); and (d) get ahead in the Army doing the kinds of work he likes best (LIKWRK).

All items except the last were retained for the final measure, resulting in a six item scale with a mean of 3.48 and a reliability of .82 (1988 LROC alpha with all seven items was also .82).

Organizational Identification. Items proposed for the identification measure include seven of the eight items in Meyer and Allen's (1984) Affective Commitment scale, with the word "Army" substituted for "organization". One item (I would be very happy to spend the rest of my career with this organization) was excluded from the scale because of its conceptual overlap with the dependent variable.

The remaining items are consistent with Ashforth and Mael's (1989) definition of identification as "the perception of oneness with or belongingness to a group, involving direct or vicarious experience of its successes or failures" (p. 34). Specific items refer to the personal meaningfulness of the Army (ARNEAN), sense of belonging to the organization (ARBLNG), feeling like the Army's problems are one's own (ARPROB), feeling like "part of the family" in the Army (ARPART), taking pleasure in talking about the Army (ARTALK), feeling an emotional attachment to the Army (AREMOT), and the belief that one could easily become as attached

to another organization as the Army (ARATCH). All items used a 5-point "strongly agree" to "strongly disagree" response format.

One item (ARPART) was dropped on the basis of the factor analysis, resulting in a six item scale with a mean of 3.60 and an alpha of .79. In previous research using four different samples, reliabilities of .88, .84, .88 and .74 were obtained for the full eight item scale (McGee & Ford, 1987; Meyer & Allen, 1984).

Anticipated Work/Family Conflict. This measure was designed to tap the extent to which the officer anticipates conflicts between family demands or the kind of family life he would like, and the demands of an Army career. Three of the proposed items were included in the 1988 LROC Survey (alpha=.84): "If I were to make the Army a career, I could maintain the kind of balance I want between my work and personal life" (WRKBAL); "The demands of an Army career would make it difficult to have the kind of family life I would like" (CARCMD); and "If I were to stay in the Army, I could provide my family with the opportunities and experiences I think are most important" (CARFAM). An additional item was added to the 1989 survey to make conflict more salient in the scale. This item states: "I foresee a lot of conflict between the demands of my job and my family life if I make the Army a career" (CARCON). A 5-point agree/disagree response format was used for all items.

The factor analysis led to the decision to drop the item referring to opportunities for important experiences (CARFAM). The final three item scale had a mean of 3.17 and a reliability of .86.

Years of Service. The fourth direct determinant, years of service, is simply the response to the question, "How many years of active duty service have you completed (including any enlisted or warrant officer time)?" Responses ranged from 2 to 15 years with a mean of 4.52. Because the sample was restricted to officers with no more than six years of commissioned service, active duty service exceeding six years reflects prior enlisted or warrant officer service. Over half (57%) of the sample had three and five years of service; 9% had more than six and 3% had more than ten years of service.

Summary. The scales used to tap the proposed direct determinants of propensity to stay have fairly high reliabilities (.79 to .86) and means above the mid-points of the scales. Officers tend to feel a sense of identification with the Army and are generally positive about their career prospects in the Army. There is also a slight tendency to agree that an Army career is likely to produce conflicts with family life. Scale intercorrelations and correlations with the antecedent and

dependent variables in the model (Tables 10 and 11) are presented after the discussion of the factor analysis in the Results section.

Common Method Variance Issues

Organizational researchers are increasingly concerned with the effects of common method variance in survey research (e.g., Williams, Cote & Buckley, 1989). When both independent and dependent variables are measured using a self-report, survey methodology, it is difficult to rule out common method variance as a plausible explanation for observed relationships. In other words, measures may be correlated simply because people have a tendency to respond in a consistent way to questions asked in a particular manner, regardless of the content.

Common method variance is clearly a potential source of bias in any survey, however, several factors are expected to mitigate the problem in this research. First, feedback from interviews and pre-tests indicates that the career and family issues covered in the survey are important to the officers in the target population. In addition, approximately 40% of the 1988 LROC respondents took the time to write in comments at the end of the survey, and comments pertaining to the survey itself were nearly all positive. When a survey is interesting and contains items that are personally relevant, respondents are likely to respond more thoughtfully.

Second, the questionnaire is divided into a number of different sections, and section titles and introductions are designed to focus attention on the content of the items. Item and response formats are also varied throughout the questionnaire. The cognitive shifts required by numerous format changes should inhibit unconscious tendencies to fall into a set pattern of responding.

The most important consideration with regard to method variance, however, is the type of bias it is likely to produce in the test of a theoretical model. For example, when identical response formats are used to measure variables hypothesized to be correlated, method variance will inflate correlations in the hypothesized direction. Consequently, results construed as support for a conceptual model may simply reflect method effects.

In the present research, inflated correlations are less likely to be a problem because variables hypothesized to be causally related are not measured using the same response formats. If method variance is a serious problem, it is the correlations among the direct determinants that are most likely to be inflated because of the common agree/disagree response format. Spuriously high intercorrelations among these variables should decrease, rather than increase the likelihood of observing the predicted independent effects on propensity to stay. Common

method variance is thus a less plausible explanation for results that support the proposed model.

Data Analysis

Data analysis proceeded in three steps: (a) preliminary analyses, (b) the path analytic test of the model, and (c) exploratory regression analyses. All analyses were conducted using SPSS-X, version 3.0 (SPSS-X User's Guide, 1988).

Preliminary analyses included a factor analysis of the 18 items proposed as measures of the direct determinants. The common factor model was used with principal axis factoring, and factors were rotated to an oblique solution. Results of the factor analysis were used to assess the severity of the common method variance problem, test the validity of a priori notions about the underlying factors, and identify complex or ambiguous items. Items with high loadings on more than one factor were dropped to facilitate interpretation and preserve the conceptual distinctiveness of the scales.

Preliminary analyses also included an examination of scatterplots to assess the linearity of the relationships among the central variables in the model. In addition, hierarchical moderated multiple regression analysis (Cohen & Cohen, 1983) was used to test for interactions among the direct determinants of propensity to stay.

The path analytic test of the model included several steps. First, Ordinary Least Squares (OLS) regression was used to estimate path coefficients for the causal linkages proposed in the model. Second, the "omitted parameters test" recommended by James, Mulaik and Brett (1982) was performed to see if the paths hypothesized to be unimportant (i.e., the paths omitted from the model) were non-significant. When omitted paths are significant (and coefficients are large enough to be of some substantive importance), the restricted theoretical model is not supported even if all hypothesized paths are significant. If the addition of omitted paths also markedly changes the coefficients for predicted paths, serious specification errors are indicated. The overall "goodness-of-fit" of the theoretical model relative to the unrestricted model was tested by computing the Q statistic (Pedhazur, 1982).

The final step in the assessment of the model involved an examination of the residuals from the regression. Both the distribution of the residuals and the demographic characteristics associated with large prediction errors were examined.

The exploratory analyses consisted of hierarchical and moderated multiple regression analyses with propensity to stay as the dependent variable. These analyses were guided by the results of the residuals analysis as well as unresolved issues in

the literature. They were designed to explore both the possible moderating effects of source of commission, and the contribution to propensity to stay of plausible determinants not included in the theoretical model. The exploratory analyses were conducted to provide a stricter test of the model and to suggest hypotheses for future research.

RESULTS

Preliminary Analyses

Factor Analysis of Direct Determinants

Analyses on A Priori Item Set

The 18 items proposed as measures of organizational identification, career prospects and work/family conflict were factor analyzed to refine the initial conceptualization of the constructs and identify inappropriate scale items. Although the common factor model was used for the primary analysis, principal components analysis was used first to determine the appropriate number of factors to retain. Eigenvalues and the percent of variance accounted for by each component are displayed in Table 4. Both the Kaiser criterion (retaining factors with eigenvalues greater than one) and the scree plot indicated that the three factor solution was best. Together, the first three factors explain 56% of the total variance in the set of 18 items.

In the second step, the three factors were extracted using the common factor model with principal axis factoring (PAF). The common factor model excludes the unique variance associated with each item from the analysis and is most appropriate when the primary purpose is to examine the underlying structure of the items (Ford, MacCallum, & Tait, 1986). SPSS-X estimates communalities through an iterative procedure beginning with the squared multiple correlation of each variable with all other variables. Table 5 shows the initial and final communality estimates.

Initial communality estimates ranged from .26 to .60 and final communalities (the squared multiple correlation of each item with each factor) ranged from .26 to .71. Items in the work/family conflict scale tended to have the highest communalities, however, variables from all the a priori scales shared a substantial amount of variance with others in the set.

Oblique (OBLIMIN) rather than orthogonal rotation was used in interpreting factors because it was assumed that the underlying factors would be correlated. The resulting pattern and structure matrix coefficients are presented in Table 6. (See pages 2-4 of Appendix A or the description of measures in the Method section for the actual questionnaire items corresponding to the variable names used in the factor analysis tables.)

Table 4

Principal Components Analysis Results:
Original Items for Direct Determinants Scales

Factor	Eigenvalue	Pct of Var	Cum Pct
1	6.25	34.7	34.7
2	2.13	11.9	46.6
3	1.68	9.3	55.9
4	.91	5.1	61.0
5	.80	4.5	65.4
6	.75	4.2	69.6
7	.70	3.9	73.5
8	.61	3.4	76.9
9	.58	3.2	80.1
10	.51	2.9	82.9
11	.49	2.7	85.7
12	.46	2.6	88.2
13	.46	2.5	90.8
14	.37	2.1	92.9
15	.35	2.1	94.9
16	.31	1.9	96.8
17	.31	1.7	98.5
18	.26	1.5	100.0

Table 5

Factor Analysis Communality Estimates:
Original Items for Direct Determinants Scales

Variable	Initial Communality	Final Communality
<u>Career Prospects Items</u>		
CARSAT	.55	.60
OPPADV	.33	.33
AGHIGH	.42	.46
AGASGN	.51	.54
AGSKIL	.57	.59
HOWCOM	.29	.26
LIKWRK	.40	.40
<u>Org. Identification Items</u>		
ARMEAN	.47	.55
ARBLNG	.34	.35
ARTALK	.26	.26
AREMOT	.52	.63
ARPROB	.32	.33
ARATCH	.33	.33
ARPART	.47	.50
<u>Work/Family Conflict Items</u>		
WRKEAL	.54	.62
CARDMD	.60	.71
CAPCON	.55	.62
CARFAM	.49	.53

Table 6

Pattern and Structure Matrices for Oblique Rotation of Common Factors:
Original Items for Direct Determinants Scales

<u>Pattern Matrix</u>				<u>Structure Matrix</u>			
Variable	1 Org. Ident.	2 Career Prospects	3 W/F Conflict	Variable	1 Org. Ident.	2 Career Prospects	3 W/F Conflict
AREMOT	.86	-.09	.08	AREMOT	.79	.23	-.29
AREMEAN	.78	-.02	.07	AREMEAN	.74	.27	-.29
AREPART	.60	.14	-.08	AREPART	.69	.40	-.41
AREPROB	.55	.05	-.01	AREHLNG	.58	.33	-.33
AREATCH	.55	.00	-.06	AREPROB	.58	.27	-.28
AREHLNG	.51	.11	-.05	AREATCH	.58	.24	-.32
ARETALK	.48	-.05	-.09	ARETALK	.50	.18	-.30
AGASGN	-.07	.74	-.05	AGSKIL	.36	.75	-.41
AGSKIL	.00	.69	-.17	CARSAT	.42	.74	-.47
AGHIGH	-.10	.69	-.07	AGASGN	.25	.73	-.27
CARSAT	.06	.64	-.22	AGHIGH	.21	.67	-.26
OPPADV	.10	.56	.13	OPPADV	.27	.56	-.11
HOWCOM	.05	.52	.11	LIRWRK	.49	.52	-.45
LIRWRK	.25	.35	-.22	HOWCOM	.20	.50	-.09
CARDMD	.03	-.01	.85	CARDMD	-.38	-.29	.84
CARCIN	.03	.04	.78	CARCIN	-.38	-.24	.78
WRKBAL	.04	-.08	.73	WRKBAL	-.42	-.35	.78
CAREAM	.26	-.03	.56	CAREAM	-.53	-.32	.69

Note. Factor intercorrelations: Factors 1 & 2, $r = .38$; Factors 1 & 3, $r = -.42$; Factors 2 & 3, $r = -.32$

The pattern matrix values represent the unique contribution of each factor to the variance of each item. These values support the a priori conceptualization of the structure of the items. Loadings for the first factor are highest for Organizational Identification items, factor 2 loadings are highest for the Career Prospects items, and factor 3 loadings are highest for the Work/Family Conflict items. Factor loadings for two items, however, (LIKWRK from the Career Prospects scale and CARFAM from the Work/Family Conflict scale) suggest that these variables are influenced by more than one factor.

Structure matrix coefficients are typically higher than pattern matrix loadings because they reflect correlations among the factors in addition to the unique variance shared by factors and variables. In other words, structure coefficients show the total correlations between the variables and the factors. Table 6 indicates that two variables in addition to LIKWRK and CARFAM are complex; ARPART and CARSAT both exhibit total correlations of .40 or more with factors they were not intended to measure.

The complex variables are both a cause and a consequence of the correlations among the factors. The Organizational Identification and Work/Family Conflict factors are most highly correlated (-.47). The Career Prospects factor has slightly lower correlations with the other two factors (.40 with Organizational Identification and -.34 with Work/Family Conflict).

In an effort to simplify the factor structure, the factor analysis was re-run excluding from each factor the item with the strongest correlation with a second factor. The excluded variables were ARPART (Organizational Identification), LIKWRK (Career Prospects), and CARFAM (Work/Family Conflict). Examination of the content of these items suggests that there are conceptual as well as empirical grounds for deleting these particular items.

Conceptual Rationale for Dropping Items

The ARPART item reads: "I do not feel like I am 'part of the family' in the Army". The word "family" in this item was intended to refer to the symbolic "Army family". This may not have been clear to respondents, however. The organizational identification items followed a long series of items on spouse and family issues. This context may have led some to interpret the item as asking if they felt less a part of their own families in the Army (e.g., separations or long hours made them feel left out of family life). This could explain the especially high correlation (.41) between ARPART and the Work/Family Conflict factor.

The LIKWRK item from the Career Prospects scale is also somewhat ambiguous, asking if the officer can get ahead in the Army "doing the kinds of work I like best". Other items in the Career Prospects scale are more specific, referring to things like advancement opportunities in one's branch and likelihood of getting assignments compatible with skills and interests. The kind of work an officer "likes best" could easily depend on its impact on his family life (e.g., "I don't like work that interferes with family life") or the way he feels about the Army (e.g., "as long as it's Army work I like it"). This could explain the considerable overlap between LIKWRK and the conflict and organizational identification factors.

Re-examination of the CARFAM item suggests that despite its high correlations with the other Work/Family Conflict items, it is qualitatively different. The other three items in the scale focus specifically on conflicting demands or the balance between work and family life. CARFAM, on the other hand, reflects an officer's belief that if he stays in the Army he can provide his family with the opportunities and experiences he thinks are most important. The item was intended to tap the opposite of conflict, or the potential for an Army career to enhance, rather than detract from family life. However it appears that the item also (or instead) taps general feelings about the organization.

In each case, dropping the most ambiguous or complex item from the a priori set appears to enhance the conceptual as well as empirical distinctiveness of the scales.

Analyses with the Reduced Set of Items

Results of the analyses with the three ambiguous items excluded are presented in Tables 7 through 9. Eigenvalues and the percentage of variance associated with the principle components (Table 7), and the communality estimates for the common factors (Table 8) are very similar to those obtained using the original set of 18 items.

The pattern and structure matrices, along with the factor intercorrelations are shown in Table 9. Examination of the factor intercorrelations indicates that eliminating the complex items produced the desired effect. The correlation between the Organizational Identification and Work/Family Conflict factors was reduced from $-.47$ to $-.42$, and correlations between the other factors also dropped slightly.

Table 7

Principal Components Analysis:
Reduced Set of Items for Direct Determinants Scales

Factor	Eigenvalue	Pct of Var	Cum Pct
1	5.01	33.4	33.4
2	2.05	13.6	47.0
3	1.57	10.5	57.5
4	.91	6.1	63.6
5	.80	5.3	68.9
6	.72	4.8	73.7
7	.67	4.5	78.2
8	.55	3.7	81.9
9	.51	3.4	85.2
10	.46	3.1	88.3
11	.43	2.9	91.2
12	.38	2.5	93.7
13	.35	2.4	96.0
14	.31	2.1	98.1
15	.28	1.9	100.0

Table 8

Factor Analysis Communality Estimates:
Reduced Set of Items for Direct Determinants Scales

Variable	Initial Communality	Final Communality
<u>Career Prospects Items</u>		
CARSAT	.54	.60
OPPADV	.32	.32
AGHIGH	.41	.46
AGASGN	.50	.57
AGSKIL	.54	.57
HOWOOM	.28	.26
<u>Org. Identification Items</u>		
ARMEAN	.47	.60
ARBLNG	.32	.34
ARTALK	.25	.26
AREMOT	.47	.61
ARPROB	.30	.33
ARATCH	.32	.33
<u>Work/Family Conflict Items</u>		
WRKBAL	.52	.60
CARDMD	.58	.72
CARCON	.55	.65

Table 9

Pattern and Structure Matrices for Oblique Rotation of Common Factors:
Reduced Set of Items for Direct Determinants Scales

Variable	Pattern Matrix			Structure Matrix		
	1 Org. Ident.	2 Career Prospects	3 W/F Conflict	1 Org. Ident.	2 Career Prospects	3 W/F Conflict
AREMOT	.83	-.07	.06	.78	.23	-.27
ARMEAN	.80	-.01	.07	.77	.27	-.26
ARPROB	.54	.06	-.01	.57	.27	-.26
ARATCH	.54	.01	-.05	.57	.23	-.28
ARBING	.49	.12	-.06	.56	.33	-.31
ARTALK	.48	-.04	-.10	.50	.17	-.28
AGASGN	-.07	.76	-.05	.24	.75	-.27
AGHIGH	-.09	.69	-.07	.34	.74	-.38
AGSKIL	.01	.68	-.16	.41	.74	-.45
CARSAT	.08	.64	-.21	.19	.67	-.25
OPPADV	.09	.56	.12	.25	.56	-.10
HOWCOM	.06	.51	.11	.21	.50	-.08
CARDMD	-.02	-.02	.84	-.37	-.29	.85
CARCON	-.06	.04	.79	-.38	-.24	.81
WRKBAL	-.08	.09	.70	-.41	-.34	.76

Note. Factor intercorrelations: Factors 1 & 2, $r = .38$; Factors 1 & 3, $r = -.42$; Factors 2 & 3, $r = -.32$

The structure matrix coefficients indicate that two items (CARSAT and WRKBAL) still display substantial total correlations with other factors; however, there are no compelling reasons to drop these items from their respective scales. CARSAT reflects overall satisfaction with Army career prospects and WRKBAL asks officers if an Army career would allow them to maintain the kind of balance they want between work and family life. Although perhaps more global than other items in the career prospects and conflict scales, conceptually, both items appear to reflect the constructs they were intended to measure. Both items also contribute to the reliabilities of their scales. Dropping CARSAT, for example, would slightly reduce the correlation between the Career Prospects and Identification factors (from .38 to .36), but only at the expense of a marked decrease in the reliability of the career prospects scale (from .82 to .77).

In summary, the factor analysis results suggest that common method variance is not a serious problem in this research. Three clearly distinct factors emerged, and their loadings were consistent with the a priori conceptualization of the constructs. Empirical and conceptual considerations led to the decision to drop one complex item from each scale, resulting in a simpler factor structure and slightly lower factor intercorrelations.

The factor analyses also highlighted the negative relationship between organizational identification and work/family conflict. In light of the overlap between these two constructs, the name of the work/family conflict scale was changed to Army/Family Conflict. This label appears to more accurately reflect the measured construct. Specifying "Army" instead of "work" as the referent clarifies the source of the conflict tapped by these items (i.e., Army career demands rather than specific work assignments) and suggests the relationship of conflict to feelings about, or identification with the Army.

Final Scale Statistics and Intercorrelations

Table 10 displays the means for the final measures of the direct determinants, scale reliabilities and intercorrelations, and correlations with the dependent variable. Correlations between the direct and indirect determinants are shown in Table 11.

Intercorrelations for the direct determinants range from .05 to -.41. Years of service is only weakly related to the other direct determinants. Career prospects, Army/family conflict and organizational identification are all moderately intercorrelated (.35 to -.41). The two most strongly correlated variables, organizational identification and Army/family conflict, also display the largest bivariate correlations (.58 and -.55) with

Table 10

Direct Determinants: Scale Statistics, Intercorrelations and
Correlations with Propensity to Stay

Variables	N	Mean	SD	1	2	3	4	5
Career Pros.	750	3.48	.73	(.82)				
Org. Ident.	754	3.60	.69	.35	(.79)			
A/F Conflict	750	3.17	.99	-.36	-.41	(.86)		
Years Service	757	4.52	1.99	.05	.17	-.14	—	
Prop. to Stay	757	3.72	1.49	.43	.58	-.55	.28	(.93)

Note. Scale reliabilities (Cronbach's alpha) are on the diagonal, correlations of .10 or greater are significant at $p < .01$.

Table 11

Correlations between Indirect Determinants, Direct Determinants and
Propensity to Stay

Direct Determinants	<u>Indirect Determinants</u>				
	Branch Match	Work Sat.	Prior Orient.	Op. Support	Inspir. Leadership
A/F Conflict	-.11	-.27	-.10	-.41	-.11
Career Pros.	.22	.49	.01	.47	.19
Org. Ident.	.10	.34	.18	.34	.22
Years Service	.01	.04	.10	.05	-.06
Prop. to Stay	.16	.39	.17	.39	.13

Note. Correlations .10 and above are significant at $p < .01$

propensity to stay. The correlation between career prospects and propensity to stay is slightly lower (.43), and years of service exhibits the weakest relationship with the dependent variable.

Table 11 shows that within the set of indirect determinants, work satisfaction and operational support exhibited the largest correlations with the direct determinants (ranging from -.27 to .49 when correlations with years of service are excluded). Branch match, prior career orientation and inspirational leadership are only weakly related to the direct determinants, with none of the correlations exceeding .22. Correlations between the indirect determinants and years of service are negligible.

The antecedent variables with the strongest relationship to the hypothesized direct determinants (work satisfaction and operational support) also exhibit the strongest correlations with propensity to stay ($r=.39$ for both). The path analysis results will indicate whether or not the intervening variables capture the effects of work satisfaction and operational support on propensity to stay.

Linearity and Homoscedasticity of Variance

Prior to conducting the path analyses, assumptions about the linearity of the proposed relationships were examined. Scatterplots showing the relationship between each exogenous and endogenous variable in the model were visually examined. None of the patterns in these plots suggested non-linear relationships.

Heteroscedasticity also appeared not to be a problem. The variance in propensity to stay was fairly consistent across levels of all the independent variables except years of service. As one might expect, there was less variance in career intentions at the highest tenure level because the large majority of officers with more than six years of service intend to stay in the Army. This is not likely to seriously reduce the predictive power of the model, however, since the linear trend will still be captured.

Interactions among the Direct Determinants

The model assumes that the effects of the direct determinants (organizational identification, career prospects, Army/family conflict, and years of service) are additive. None of the determinants is expected to have effects that vary across levels of the other three direct determinants. The assumption that interaction effects are not significant was tested through hierarchical moderated multiple regression analysis (Cohen & Cohen, 1983).

The test for interaction effects involves computing interaction terms (e.g., ORGID x YEARS) for all combinations of the four direct determinants. A regression analysis is then performed in which interaction terms are entered into the regression after variables representing main effects have been entered.

Following Cohen and Cohen's (1983) recommendation, a significance testing strategy analogous to Fisher's "protected t" test was employed to protect the significance level and reduce the likelihood of Type I errors. This procedure involves entering the exploratory variables (i.e., the interaction terms) as a set in the final step of the analysis. One assesses the significance of the effects of individual variables only if the overall increase in the explained variance is significant.

In the present case, the R^2 for the set of four direct determinants was .500 ($F=181$; $df=4,725$) and the set of the six interaction terms resulted in an R^2 change of .011. This increment was not significant at $p<.01$ (F change=2.66; $df=5,724$), suggesting that interactions among the proposed direct determinants are not likely to be significant, independent sources of variance in propensity to stay.

Path Analysis

Test of the Significance of Hypothesized Paths

The first step in the path analysis involved computing standardized regression coefficients (i.e., path coefficients) for each hypothesized causal linkage. Ordinary least squares (OLS) regression was used to regress the three endogenous variables on their hypothesized antecedents. The resulting path coefficients are displayed in Figure 2, along with the R^2 for each endogenous variable. A significance level of $p<.01$ is used for all coefficients, and the sample ($n=714$) for all analyses includes only those officers with complete data for all variables.

The results of the propensity to stay regression show that all of the paths from the hypothesized direct determinants in the model are significant. The effects are also substantial, with path coefficients ranging from .17 (for years of service) to .35 (for identification).

Together, the four direct determinants account for about half the variance in propensity to stay ($R^2=.495$, Adjusted $R^2=.493$). Organizational identification and Army/family conflict have the strongest independent effects in this sample.

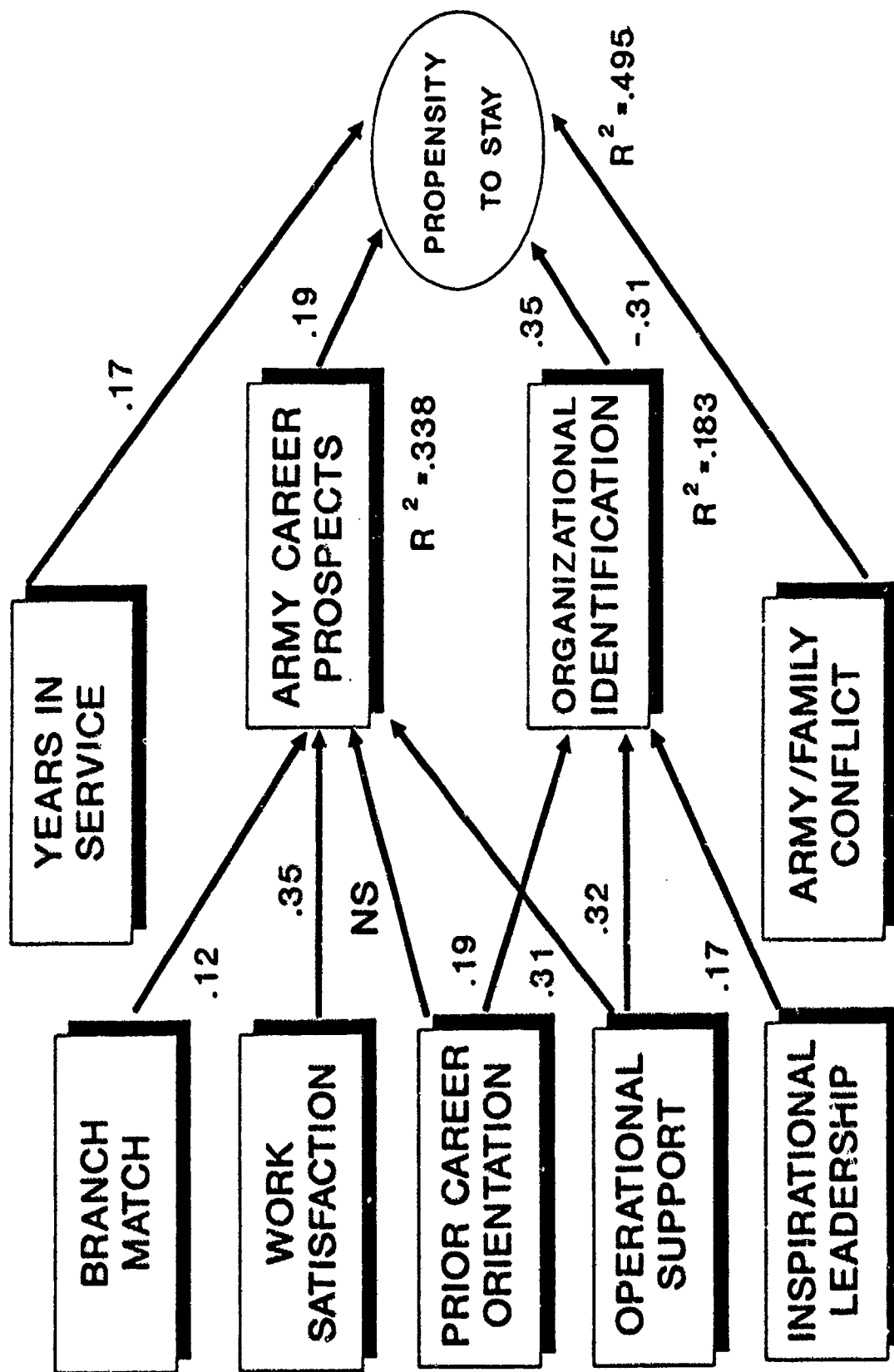


Figure 2: Path Coefficients for the Proposed Career Intentions Model

With regard to the intervening variables, six out of seven of the hypothesized paths from antecedent variables are significant. Operational support, prior career orientation and inspirational leadership all demonstrate the expected effects on organizational identification. Together, these variables explain 18% of the variance in identification ($R^2=.183$, Adjusted $R^2=.180$).

Work satisfaction, operational support and branch match are significant predictors of career prospects, together accounting for about 34% of the variance ($R^2=.338$, Adjusted $R^2=.334$). The predicted path from prior career orientation was not significant.

Omitted Parameters Test

A two step hierarchical multiple regression analysis was used for the omitted parameters test. First, each endogenous variable was regressed on its hypothesized antecedents (Step 1). In the second step, the antecedent variables that were not expected to have significant, direct effects on the endogenous variables were added to the regressions. The purpose of this analysis is to see if paths originally excluded from the model (i.e., implicitly hypothesized to be zero) have significant effects.

Results for the regressions with propensity to stay as the dependent variable are summarized in Table 12. The first column in the table shows the regression coefficients and R^2 after Step 1, when only the predicted paths are included. These coefficients are identical to those displayed in the path diagram in Figure 2. The second column shows the regression coefficients after Step 2, when all remaining antecedent variables in the model have been entered.

In the propensity to stay regressions, the change in the R^2 produced by the addition of non-predicted paths is small (less than 2%), but significant. The increase in the explained variance is largely attributable to the effects of work satisfaction. Work satisfaction, with a path coefficient of .11, is the only hypothesized indirect determinant to exhibit significant direct effects on the dependent variable. Work satisfaction alone accounts for an additional 1% of the variance in propensity to stay.

The addition of the path from work satisfaction does not, however, substantially alter the path coefficients or the relative importance of the other variables. The effects of organizational identification and Army/family conflict (.32 and -.28, respectively) are slightly smaller with work satisfaction in the equation. Yet, these two variables still have substantially larger effects than the other three significant predictors.

Table 12

Hierarchical Multiple Regression Results for Propensity to Stay
Using Predicted and Non-Predicted Paths

Independent Variables	Step 1: Predicted Paths		Step 2: Omitted Paths	
	B	Beta	B	Beta
Org. Identification	.76	.35 *	.68	.32 *
A/F Conflict	-.47	-.31 *	-.43	-.28 *
Career Prospects	.38	.19 *	.25	.12 *
Years Service	.12	.17 *	.12	.16 *
Work Satisfaction			.19	.11 *
Prior Orientation			.09	.07
Op. Support			.14	.06
Branch Match			.13	.04
Insp. Leadership			-.06	-.02
End of Step:	R=.704 R ² =.495 *		R=.717 R ² =.514 *	
			R ² change=.018 *	

Note. Regression coefficients in the Step 2 column are final weights with all variables included.

* Significant at $p < .01$

Tables 13 and 14 summarize results of the omitted parameters test for the two intervening variables, career prospects and organizational identification. When all possible antecedents are included in the regression, there are three additional significant paths to organizational identification and one new path to career prospects.

The one unexpected path to career prospects comes from Army/family conflict. Although work satisfaction and operational support are still the most influential variables, the weight assigned to Army/family conflict is higher than weights for two of the predicted paths (branch match and prior orientation). In combination, the set of additional variables results in an R^2 increase of .021.

With regard to organizational identification, three of the four additional variables (Army/family conflict, work satisfaction, and years of service) have significant, independent effects on organizational identification. The inclusion of these omitted parameters substantially increases the explained variance (from 18% to 29%). It also results in a markedly lower path coefficient for operational support (the coefficient drops from .32 to .15).

Of the three additional variables, Army/family conflict has the strongest independent effect on identification. Paths from both conflict and work satisfaction (another omitted path) are stronger than the paths from the predicted antecedents. This is further evidence of a poorly specified set of original predictors.

Goodness of Fit Test

In the omitted parameters test the focus is on path coefficients. The "goodness-of-fit" test, on the other hand, is concerned with the proportion of variance explained by the two alternative models. The magnitude of "Q" (the goodness-of-fit index) reflects the predictive power of the restricted, theoretical model relative to the power of the full set of potential predictors.

The goodness-of-fit index (also called the "generalized multiple regression coefficient" (Mathieu & Hamel, 1989)) was computed according to procedures recommended by Pedhazur (1982, pp. 617-628). The first step in computing Q was to estimate squared residual path coefficients by subtracting the R^2 for each endogenous variable from one. The product of these squared residual path coefficients was then subtracted from one. Completing these calculations for both the full and restricted models produces two values, the ratio of which gives Q. This

Table 13

Hierarchical Multiple Regression Results for Career Prospects
Using Predicted and Non-Predicted Paths

Independent Variables	Step 1: Predicted Paths		Step 2: Omitted Paths	
	B	Beta	B	Beta
Work Satisfaction	.30	.35 *	.27	.32 *
Op. Support	.37	.31 *	.30	.25 *
Branch Match	.18	.12 *	.17	.11 *
Prior Orientation	-.01	-.01	-.02	-.03
A/F Conflict			-.11	-.15 *
Insp. Leadership			.07	.06
Years Service			.00	.01
End of Step:	R=.581 R ² =.338 *		R=.599 R ² =.359 *	
			R ² change=.021 *	

Note. Regression coefficients in the Step 2 column are final weights with all variables included.

* p < .01

Table 14

Hierarchical Multiple Regression Results for Organizational
Identification Using Predicted and Non-Predicted Paths

Independent Variables	Step 1: Predicted Paths		Step 2: Omitted Paths	
	B	Beta	B	Beta
Op. Support	.36	.32 *	.17	.15 *
Prior Orientation	.13	.19 *	.10	.15 *
Inspir. Leadership	.21	.17 *	.16	.14 *
A/T Conflict			-.18	-.25 *
Work Satisfaction			.14	.18 *
Years Service			.05	.13 *
Branch Match			.00	.00
End of Step:	R=.428	R ² =.183 *	R=.544	R ² =.296
			R ² change=.113 *	

Note. Regression coefficients in the Step 2 column are final weights with all variables included.

* Significant at $p < .01$

index can take on values ranging from zero to one, with larger values indicating a better fit. Values in the neighborhood of .90 are generally construed as indicating a reasonable fit between the restricted model and the data (Mathieu & Hamel, 1989).

The value of Q in the present case was .89, suggesting a "reasonable" fit. The fact that Q was less than 1.00 was due primarily to the missing paths from work satisfaction and Army/family conflict. The R^2 for organizational identification was considerably larger when these variables were included in the set of predictors.

The Q statistic can also be tested for significance by deriving a value based on sample size and the natural log of Q . However, as Pedhazur (1982) points out, with large samples, even very small discrepancies between the full and restricted models are likely to be significant. Pedhazur thus suggests that researchers focus on the magnitude of Q (which is not a function of sample size) rather than tests of significance.

Total, Direct, and Indirect Effects on Propensity to Stay

In order to compare the relative importance of the empirical determinants of propensity to stay, regressions for each endogenous variable were re-computed with only significant paths retained. The path coefficients for this empirically derived model are displayed in Figure 3. These coefficients (carried to three decimal places) were used to compute the total and indirect effects reported in Table 15.

Three variables, Army/family conflict, work satisfaction and operational support have substantial indirect effects on propensity to stay. When direct and indirect effects are summed, Army/family conflict emerges as the most important determinant of propensity to stay. Caveats in interpreting these effects because of the lack of a priori causal hypotheses are presented in the discussion section.

Work satisfaction also has substantial total effects, with a small direct effect as well as indirect effects through both intervening variables. When both direct and indirect effects are taken into account, work satisfaction appears to be a more powerful determinant of propensity to stay than career prospects. Of the remaining antecedent variables, only operational support had sizable total effects, also operating through both intervening variables.

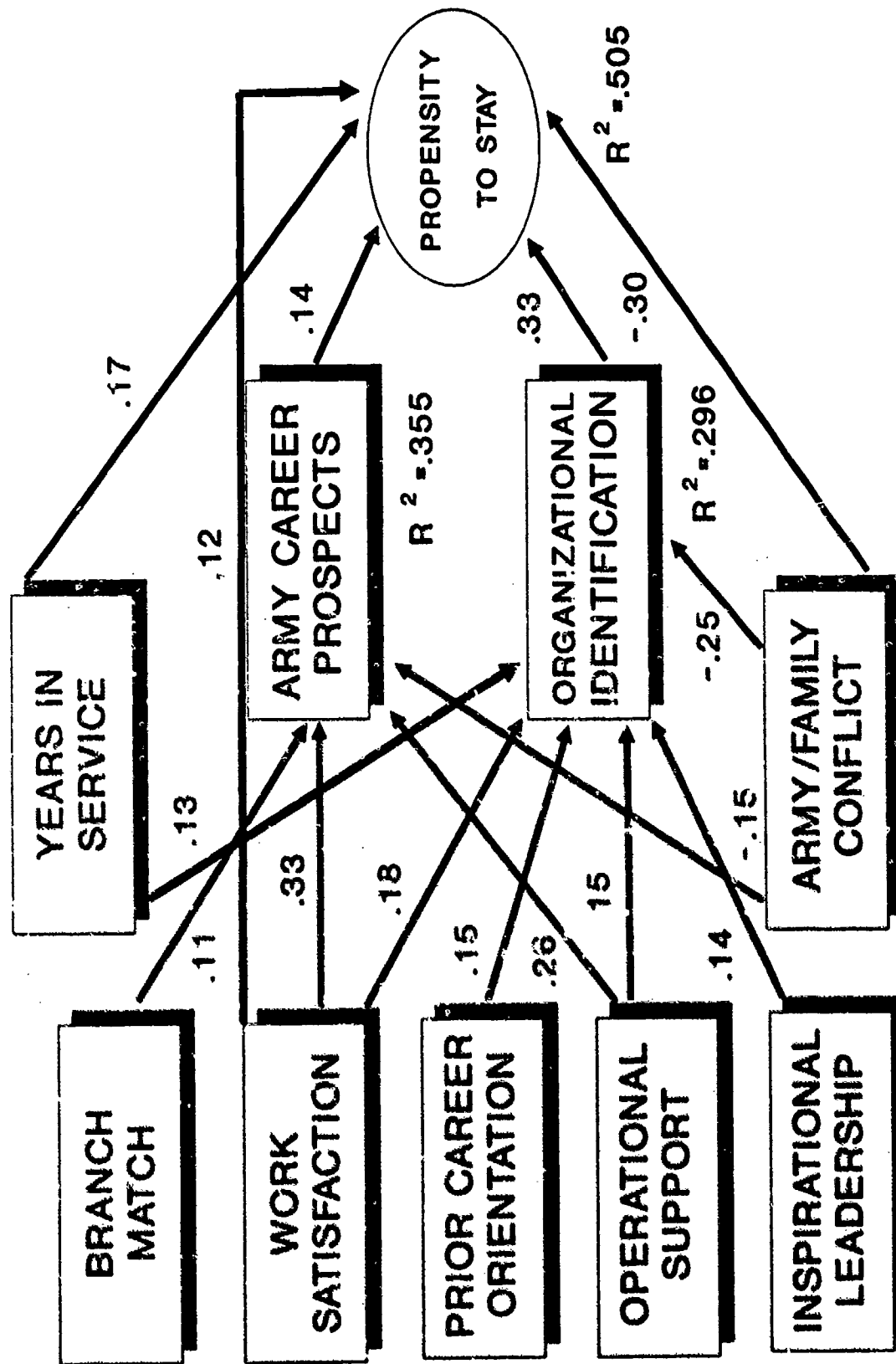


Figure 3: Path Coefficients for Empirically Derived Model

Table 15

Total, Direct and Indirect Effects on Propensity to Stay
for Empirical Model

	Zero Order Corr.	Total Effects	Direct Effects	Indirect Effects		
				Thru CP	Thru ID	Total
Org. Identification Career Prospects	.58 .43	.33 .14	.33 .14			
A/F Conflict	-.55	-.40	-.30	-.020	-.083	-.103
Work Satisfaction	.39	.22	.12	.046	.058	-.104
Years Service	.28	.21	.17	ns	.044	.044
Op. Support	.39	.09	ns	.036	.049	.085
Prior Career Or.	.17	.05	ns	ns	.048	.048
Branch Match	.16	.02	ns	.016	ns	.016
Insp. Leadership	.13	.05	ns	ns	.045	.045

Residuals Analysis

The final step in the assessment of the model was the examination of residuals. First, standardized residuals were plotted against predicted values to test assumptions about the normality, linearity, and homoscedasticity of error terms. The only residuals analyzed in detail are those from the regression of propensity to stay on the four direct determinants proposed in the model (career prospects, organizational identification, Army/family conflict, and years in service). The addition of work satisfaction did not result in any noticeable change in the distribution of residuals.

Distribution of residuals. The regression of propensity to stay on the direct determinants resulted in a distribution of residuals that was not quite normal. First, there was a larger than expected concentration of residuals between 0 and +1. This slight deviation from normality appears to be a function of the distribution of observed scores. More officers than one would expect (given a normally distributed variable) have extremely high propensity to stay scores, and fewer than one would expect have scores in the less extreme "leaning toward the Army" range. The model tends to predict the less extreme (and less probable, in this sample) score for many officers definitely intending to stay, resulting in a cluster of small positive residuals.

More interesting was the fact that the tails of the distribution of residuals were not balanced. Most of the extreme residuals (more than plus or minus two standard deviations from the mean) were negative. In fact, of the 34 cases with residuals exceeding two standard deviations, all but six (or 82%) were negative. The extreme negative residuals typically occurred when officers were definitely intending to leave the Army, but had predicted scores in the "neutral" or "inclined to stay" range. In other words, the model was less successful predicting decisions to leave the Army than it was in predicting decisions to stay.

Characteristics associated with large residuals. In a second set of analyses, officers with residuals more than one standard deviation from the mean were isolated and the demographic characteristics of these officers were compared to those of the sample as a whole. The purpose of this analysis was to see if there were any personal or family characteristics systematically associated with positive or negative prediction errors.

Officers who were more likely to leave than predicted were different from the total sample in several ways. First of all, they were considerably more likely to be USMA graduates (50% vs. 41% in the total sample) and less likely to be ROTC non-scholarship graduates (21% vs. 29% in the total sample). These

officers were also more likely to have time remaining in their active duty service obligations and to have majored in engineering or a physical science in college. These latter characteristics, however, are much more typical of USMA than ROTC non-scholarship officers, and thus their association with negative residuals may be simply a result of the relatively high proportion of USMA officers in this group.

In terms of family characteristics, officers more inclined to leave than predicted were less likely to have children (65% childless vs. 53% overall) and slightly more likely to have highly educated, career-oriented spouses currently working in professional level jobs.

Officers who were more likely to stay than predicted were largely similar to the sample as a whole. The primary difference was that a greater proportion had spouses who were not currently employed (53% not working vs. 46% in the total sample) and whose long-term work plans did not include a career (33% not career oriented vs. 24% in the total sample). There were also 5% fewer USMA graduates in this group than there were in the total sample.

In summary, the examination of residuals suggested that family and military characteristics might account for some of the variance not explained by the attitudinal and perceptual variables specified in the model. The possible contribution of these variables to the prediction of propensity to stay is examined below.

Exploratory Regressions with Propensity to Stay

Source of Commission Effects

For the first of the exploratory analyses, effects associated with source of commission were examined. This variable warrants separate attention for two reasons. First, source of commission is a meaningful way to group officers in the Army, capturing differences across USMA and ROTC officers in academic and military training, as well as length of obligation and branch assignments. Second, as noted earlier, USMA officers are overrepresented in the sample, thus it is important to establish that the model does not operate differently in this subgroup.

Following procedures recommended by Cohen and Cohen (1983), hierarchical moderated multiple regression analysis was employed to test both the direct and possible moderating effects of source of commission on propensity to stay. This type of analysis essentially affords a test of the differential validity of the predictors in the model within the USMA and ROTC groups (Cohen & Cohen, 1983).

Two separate regressions were conducted, one using only the hypothesized direct determinants of propensity to stay, and one using all antecedent variables in the model. The steps for each regression (source of commission, then model variables, then interaction terms) were identical except for the number of model variables included in the analyses.

A source of commission dummy variable (coded "1" for USMA and "0" for ROTC) was created first to assess the direct effects of USMA versus ROTC commissions. This variable had a correlation of -.25 with propensity to stay (USMA officers are less likely to intend to stay) and significant correlations with three of the nine antecedent variables in the model. Being a USMA officer was associated with more anticipated Army/family conflict ($r=.27$), less organizational identification ($r=-.19$), and slightly fewer years of service ($r=-.12$). As indicated in Table 16, the USMA/ROTC dichotomy alone accounted for 6% of the variance in propensity to stay.

For Step 2, the model variables were entered into the equation (hypothesized determinants only for Regression 1, and the full set of model variables for Regression 2). Entering source of commission into the equation first partials out the effects of differences in the mean scores of USMA and ROTC officers on the model variables. Therefore the regression coefficients for the model variables at Step 2 reflect pooled within group effects, or a kind of "average" of the effects of these variables within the USMA and ROTC subgroups (Cohen & Cohen, 1983). These "averaged" coefficients (not reported here) are not substantially different from those obtained when source of commission is not included in the regression. This does not, however, rule out the possibility that the model variables have markedly different effects within the USMA and ROTC subgroups.

The possibility that the optimal regression coefficients for two groups are significantly different is tested by adding interaction terms to the regression (Cohen & Cohen, 1983). Because of the 0/1 coding for commission source, interaction terms for all ROTC officers are "0" and interaction terms for all USMA officers are simply their scores on the independent variables. A significant interaction term indicates that the optimal weight for that variable is significantly different across groups.

Table 16 indicates that in both regressions, the R^2 change with the addition of the entire set of interaction terms is not significant (Regression 1, $F(9,704)=1.62$ for the increment in R^2 ; in Regression 2, $F(18,695)=1.67$). The lack of significance for the set of variables obviates the need to test the individual interaction terms for significance.

Table 16

Regression Results Testing Source of Commission
Moderating Effects on Propensity to Stay

Variable Entered on Each Step	Change R ²	Cum R ²
Regression 1		
Step 1: Source of Commission	.062 *	.062
Step 2: Predicted Determinants	.438 *	.500
Step 3: 4 Interaction Terms	.005	.505
Regression 2		
Step 1: Source of Commission	.062 *	.062
Step 2: All Model Variables	.458 *	.520
Step 3: 9 Interaction Terms	.012	.532

* R² change significant at p < .01; N=714.

Two conclusions can be drawn from these results. First, the effects of source of commission on propensity to stay are basically captured through the attitudinal variables (particularly Army/family conflict, based on the bivariate correlations). The cumulative R^2 at the end of Step 2 for each regression is less than 1% larger than the R^2 for the same regression when source of commission is excluded (see Table 12).

Second, because path coefficients for the model variables are not significantly different across groups, the same model can be applied to both USMA and ROTC officers. Thus, the overrepresentation of USMA officers in the sample does not bias the test of the theoretical model. There are, however, important differences in the means of the model variables across groups. Thus descriptive statistics need to be weighted or reported separately for the two groups to accurately reflect attitudes in the target population.

Exploratory Variables

The residuals analysis suggested several demographic variables in addition to source of commission that might enhance the predictive power of the model. Variables selected for examination in the exploratory analyses include two spouse career variables (employment status and career aspirations) and four variables reflecting personal (college major and presence of children) and military (obligation status and Army scholarship) characteristics of the officer.

The exploratory analyses also examine the possibility that perceptual variables excluded from the model have independent effects on propensity to stay. Perceptions of alternatives, for example, were omitted from the model because there is little evidence, in military samples in particular, that such perceptions are independent sources of variance in turnover intentions. However, because of the theoretical importance of alternative opportunities in turnover research, exploratory analyses did include two items asking about alternatives.

The model also failed to include a perceptual measure of the constraints or difficulties associated with leaving the organization. Time in service was included as a surrogate for tenure-related organizational investments, but other types of investments (e.g., a home) or situations can also make it difficult to leave a job. Situational constraints on leaving an organization might include such things as the recent or expected birth of a child, community ties, lack of resources to conduct a job search, or a spouse's job. An item asking if personal or family factors would make it difficult to leave the Army was included in the exploratory analyses to assess the possible effects of such constraints on retention intentions.

Measures. In the set of officer characteristics, the officers who received Army scholarships (ROTC scholarship recipients and all USMA officers, 66% of the sample) were given scores of "1" and non-scholarship officers were given scores of "0" (34%). Scholarship status largely reflects the Army's evaluation of the academic and leadership potential of officer candidates. Only candidates with exceptional high school records (e.g., good grades, high SAT's, participation in sports or student government) are selected for USMA and ROTC scholarships.

Obligation status was determined by asking "How many months do you have remaining in your obligated period of active duty service (including additional obligations incurred from PCS, military training, civilian schooling)? Asking officers to include additional obligations incurred from training or relocation (a permanent change of station, or PCS move) meant that a number of officers who had completed their initial obligations would still be included in the "under obligation" groups. Codes for obligation status ranged from -2 to +2, positive scores indicating that the officer still has obligated time to serve. The five categories include: (-2) obligation completed more than one year ago (4.5%); (-1) obligation completed within the past year (19%); (1) less than one year remaining in the obligation (32%); (2) one or more years to go (38%). A score of "0" was assigned to the officers (6.5%) whose obligation status could not be determined because of missing or inconsistent data.

The variable "children" was coded "1" for officers with children (47%) and "0" for officers without children. The "hard science major" variable was coded "1" for officers whose college majors fell into physical science, computer science, or engineering categories (36%), and "0" for all others.

For the spouse variables, employment status was coded "2" if the officer said that his wife was employed in a "professional level" job, "1" if the wife was working but not in professional job, and "0" if the wife was not working. Career orientation was measured by asking the officer to report his spouse's long-term work/career aspirations. Four categories were created from the five options: (1) not interested in working (10%); (2) interested in working, but not career oriented (14%); (3) career oriented, but willing to accept career interruptions (67%); and (4) career oriented and not willing to accept interruptions (9%).

The three perceptual measures include two items measured using a 5-point "very easy" to "very difficult" scale. One ("easy to find civilian job") asked "How difficult do you think it would be for you to find a good civilian job right now, considering both your own qualifications and current labor market conditions?". High scores reflect perceptions that it would be easy to find a job. The second item ("personal/family

constraints on leaving") asked "How difficult would it be for you to leave the Army in the next year or so given your current personal or family situation?". Higher scores on this item indicate greater constraints or difficulties associated with leaving.

The third perceptual item uses a 5-point "much better in the Army" to "much better in civilian life" response scale to tap perceptions of pay in "a civilian job you could realistically expect to get". A higher score indicates that pay is perceived to be better in civilian life.

Means, standard deviations, intercorrelations, and correlations with propensity to stay for the exploratory variables are displayed in Table 17. Bivariate correlations with propensity to stay suggest that scholarship officers, officers still under obligation and officers with a background in the hard sciences are more likely to intend to leave. Similarly, officers who believe that pay is much better in civilian life and who expect that they can easily find a good job are more likely to plan on leaving the Army.

Officers with children, and those whose wives are less career-oriented are slightly more likely to intend to stay in the Army. The strongest correlate of propensity to stay is the perception that personal or family factors would make it difficult to leave.

The first set of exploratory regression analyses focused on the additional variance explained by the three sets of factors. Three hierarchical regressions were conducted, each with a different ordering of the sets of exploratory variables. The significant predictors from the test of the theoretical model (the four hypothesized determinants plus work satisfaction) are entered first in each regression.

The results presented in Table 18 indicate that the officer characteristics and spouse career variables have the weakest independent effects on propensity to stay. The set of three alternatives and constraints variables, on the other hand, accounts for a substantial increment in the explained variance, even when entered after the demographic and spouse variables. Together the three sets of variables account for an additional 6.5% of the variance in propensity to stay, with most of the increase due to the alternatives/constraints.

Within the set of alternatives/constraints variables, the item asking about personal/family constraints on leaving was by far the most important. This item had a path coefficient of .21, compared to non-significant coefficients of -.03 and -.05 for the civilian jobs and civilian pay items when the alternatives/constraints set was entered right after the model predictors.

Table 17

Descriptive Statistics and Intercorrelations for Exploratory Variables

	Mean	SD	1	2	3	4	5	6	7	8	9
<u>Personal Characteristics</u>											
1. Army Scholarship	.66	.47	-								
2. Obligation	.81	1.25	.26	-							
3. Children	.46	.50	-.15	-.16	-						
4. Hard Science Major	.36	.48	.34	.14	.03	-					
<u>Spouse Characteristics</u>											
5. Employment Status	1.93	.89	.08	.08	-.35	-.05	-				
6. Career Orientation	3.75	.74	.04	.04	-.23	.03	.22	-			
<u>Alternatives/Constraints</u>											
7. Easy to Find Civ. Job	3.74	.73	.23	.10	-.05	.21	.04	.02	-		
8. Civilian Pay Better	4.07	.98	.17	.09	-.09	.20	.06	.06	.31	-	
9. Personal/Family Constraints on Leaving	2.85	1.16	-.25	-.12	.13	-.21	-.13	-.09	-.53	-.28	-
<u>Dependent Variable</u>											
10. Propensity to Stay	3.70	1.49	-.31	-.25	.15	-.19	-.15	-.17	-.23	-.24	.46

Note. All correlations greater than .10 are significant at $p < .01$; $N = 710$.

Table 18

Additional Variance Explained in Propensity to Stay
by Three Sets of Exploratory Variables

Variables Entered on Each Step	Change R ²	Cum R ²
Regression 1		
Step 1: Model Predictors	.502 *	.502
Step 2: Spouse Career Variables	.009 *	.511
Step 3: Alternatives/Constraints	.050 *	.561
Step 4: Officer Characteristics	.006	.567
Regression 2		
Step 1: Model Predictors	.502 *	.502
Step 2: Alternatives/Constraints	.053 *	.555
Step 3: Spouse Career Variables	.006 *	.561
Step 4: Officer Characteristics	.006	.567
Regression 3		
Step 1: Model Predictors	.502 *	.502
Step 2: Officer Characteristics	.018 *	.520
Step 3: Spouse Career Variables	.006	.526
Step 4: Alternatives/Constraints	.042 *	.567

* R² change significant at p < .01; N=710.

When the spouse items were entered into the equation first, the spouse career orientation item just achieved significance with a slightly higher coefficient (-.07) than the employment status item (-.06). Two items were significant when the officer characteristics were entered first: scholarship status (-.10) and presence of children (.07). Only scholarship status remained significant once the spouse variables were entered.

For the final analysis, an empirically derived model was tested using only the three consistently significant exploratory variables: constraints on leaving, Army scholarship and spouse career orientation. The results of adding these three variables to the significant model predictors are presented in Table 19.

The model variables accounted for 50% of the variance in propensity to stay, and the three new variables added 6% to the explained variance. Most noteworthy is the strong effect of personal and family constraints on leaving. One would expect at least a small relationship simply because the item refers to leaving the Army. The strength of the effect is surprising, however. The path coefficient for personal/family constraints is comparable in magnitude to coefficients obtained for organizational identification and Army/family conflict. These results suggest that efforts to identify non-work constraints on employment decisions could be useful in turnover research.

Summary

In summary, the theoretical model accounted for approximately 50% of the variance in propensity to stay. All of the hypothesized direct determinants had significant independent effects on propensity to stay, and only one of the five antecedent variables (work satisfaction) had unexpected direct, as well as indirect effects. Including work satisfaction as a direct determinant of propensity to stay increased the explained variance in the dependent variable from 49.5% to 50.5%.

With respect to the intervening variables, the hypothesized antecedents explained 34% of the variance in career prospects. The addition of the unspecified path from Army/family conflict to career prospects resulted in a small increase (just under 2%) in the explained variance.

In contrast, the omitted parameters test for organizational identification indicated the possibility of three additional influences (Army/family conflict, work satisfaction, years of service) on identification. Together these variables increased the R^2 for organizational identification from .18 to .30. With the addition of the three significant omitted parameters, all of the hypothesized antecedents still had significant coefficients,

Table 19

Hierarchical Multiple Regression Results for Propensity to Stay
Using Model and Significant Exploratory Variables

Independent Variables	Step 1: Predicted Paths		Step 2: Omitted Paths	
	B	Beta	B	Beta
Org. Identification	.71	.33	.57	.26
A/F Conflict	-.47	-.31	-.38	-.24
Career Prospects	.26	.13	.27	.13
Years of Service	.12	.17	.10	.14
Work Satisfaction	.20	.12	.21	.12
Constraints on Leaving			.29	.22
Army Sea Warship			-.26	-.08
Spouse Career Orientation			-.14	-.07
End of Step:	R=.708	R ² =.502	R=.750	R ² =.562
			R ² change=.061	

Note. Regression coefficients in the Step 2 column are final weights with all variables included; all coefficients are significant $p < .01$.

but their effects were not large. Clearly, several important determinants of organizational identification were not specified in the model.

Despite the problems predicting organizational identification, the goodness-of-fit test suggested that the overall model fit the data quite well. Residuals analyses indicated that the largest errors occurred when officers who were actually intending to leave the Army were predicted to be neutral or inclined to stay. Officers more inclined to leave than predicted had several distinctive personal and family characteristics, the effects of which were examined in the exploratory analyses.

The supplementary analyses indicated that the direct determinants specified in the model do not have interactive effects, nor does source of commission interact with other variables in the model to determine propensity to stay. The exploratory analyses also suggested that academic background, spouse career orientation, and personal/family constraints warrant examination in future research.

DISCUSSION

Weiner (1982) observed that it is unusual to find a study that simultaneously relates instrumental motivation, job satisfaction, and commitment to an outcome variable so that their relative contributions can be ascertained. Scholl (1981) also emphasized the need to conceptually and empirically distinguish different types of motivational processes or forces. Yet it was noted in the introduction that the turnover literature is still largely characterized by separate streams of research focusing either on commitment (affective or behavioral) or job satisfaction and expected utility constructs. Schneider and Dachler (1978) offered a more content oriented critique of the turnover literature, noting that the search for antecedents of turnover is typically limited to specific job or work context variables.

The model tested here reflects the broader perspective advocated by these theorists. Variables reflecting clearly different cognitive and affective processes were simultaneously examined, and career, organizational, family, and economically oriented factors were proposed as antecedents of turnover intentions. Results supporting the importance of these factors have several implications for the way we conceptualize the determinants of turnover intentions. These implications are discussed below.

Organizational Identification

Organizational identification is defined as a process whereby the individual's status as a member of the organization becomes a salient aspect of his or her social identity (Ashforth & Mael, 1989; Turner, 1987). Strongly identified individuals tend to experience the organization's successes and failures as their own and to attribute to themselves the prototypical characteristics of the organization. An intention to remain with or exert effort on behalf of the organization is likely to follow identification, but it is not a necessary component.

Although organizational commitment is a more commonly examined antecedent of turnover intentions, the focus on organizational identification was deemed promising for several reasons. First, identification is typically viewed as a critical component of affective commitment (Buchanan, 1974; Meyer & Allen, 1984; Porter et al., 1979), and thus may capture much of the variance in turnover intentions typically explained by commitment. The strong bivariate correlation between identification and propensity to stay in this research ($r=.58$) suggests that this is the case. In a recent meta-analysis the mean weighted correlation between attitudinal commitment and turnover intentions was slightly lower ($-.52$), even when

corrected for attenuation (Mathieu & Zajac, 1990). An advantage of the identification construct is that there is no intentional component to confound efforts to compare effects across variables.

Second, identification is both conceptually and empirically distinct from job satisfaction. The correlation between identification and work satisfaction in this sample ($r=.34$) is considerably smaller than the typical correlation between attitudinal commitment measures and work satisfaction (the mean weighted, corrected correlation was .63 in the Mathieu and Zajac (1990) meta-analysis).

Evidence that organizational identification is a distinctive phenomenon and strongly related to turnover intentions, even when competing with other important determinants, is encouraging from an empirical perspective. There are also theoretical advantages to a focus on identification. Social identity theory offers a useful framework for defining the construct and analyzing the antecedents, consequences, and processes involved in identification (Ashforth & Mael, 1989). Related social psychological literature on values, group attraction and group effects may provide further insights into the nature and causes of the phenomenon.

The focus on identification also highlights the need to consider organizational characteristics in the study of turnover. Reichers (1985) attributes the lack of progress in the commitment literature, in part, to the failure to consider the "organization" in organizational commitment research. Identification, on the other hand, is grounded in theory that emphasizes the importance of the objective and perceived attributes of the identification target.

Some organizations, for example, cultivate a distinctive image, embody an identifiable value system, or articulate their mission in terms of some higher social good. The potential for identification in this type of organization is especially high, particularly if organizational training and socialization experiences are geared toward inculcating and reinforcing organizational values (Hall & Schneider, 1970; Ashforth & Mael, 1989).

The military epitomizes this type of organization, and this may account for the strong identification/turnover intentions relationship observed in this sample. Yet many public and service organizations (e.g., schools, law enforcement agencies, advocacy groups) may share these attributes. Private firms are also increasingly concerned with establishing strong, value-oriented corporate cultures (Rousseau, 1990). Differences across organizations in distinctiveness, image and prestige, and socialization practices may account for sample variations in both

the level of identification and the importance of identification as a determinant of turnover (Ashforth & Mael, 1989).

The nature of the psychological contracts organizations establish with employees (e.g., relational vs. transactional per Rousseau's (1990) distinction) may also be an important explanatory variable. Rousseau (1990) found that employees who perceived the contract in relational terms (i.e., loyalty and to development within the organization are emphasized) typically intended to stay longer. Relational versus transactional contracts are likely to correspond to "institutional" versus "occupational" organizational structures and orientations (Moskos, 1986; Wood, 1982). In a related vein, the "commitment norm" in an organization may capture a host of related constructs (Meyer & Allen, 1988). In a longitudinal, multiorganizational study, the only one of ten work context variables (assessed at six months in the organization) to predict later commitment (at eleven months) was the perceived commitment norm (Meyer & Allen, 1988).

Reichers' (1985) multiple constituencies approach to organizational commitment could also be usefully extended to the study of identification and turnover. In some cases, client groups or subgroups within the organization may be the focus of identification (Reichers, 1986). In the Army, for example, branch or unit identification may supersede organizational identification. In other cases, employees may identify with professional or occupational groups outside the organization (Lachman & Aranya, 1986). The implications of these potentially conflicting social identities on organizational identification and turnover remain to be explored. The extent or nature of an employee's identification with family roles also warrants examination, particularly in light of the unexpectedly strong relationship between Army/family conflict and organizational identification in this research.

Work/family Conflict

The global measure of anticipated Army/family conflict had strong direct and indirect effects on propensity to stay in this research. These results clearly suggest the potential importance of family factors in the turnover decisions of young, married professionals.

One could argue that family factors influence turnover only in "greedy institutions" (Segal, 1986) like the military, where time, separation, and relocation demands are extreme. Yet the military literature suggests that it is the subjective experience of conflict, not the extent or frequency of time and separation demands that influences turnover intentions (Jans, 1988; Szoc, 1982). Therefore, any job may be experienced as precipitating conflict if requirements are incompatible with family obligations

or values. Variations in family obligations associated with different family life cycle stages (e.g., single, just starting a family, "empty nest") may be a more important determinant of subjective conflict than objective job demands.

The movement in corporate America toward more family oriented programs (e.g., childcare) and policies (e.g., flexible work schedules) also suggests that work/family conflict occurs across a broad spectrum of organizations. Moreover, there is evidence that conflicts, particularly with respect to time, influence a variety of employment decisions. In a large, national survey of Fortune 500 employees, 20% of the married male respondents indicated that they had sought a less demanding job for family reasons, and 30% had refused a job, promotion, or transfer because it would have meant less time for their families (*Fortune*, February, 1987). Time for the family was an even more important factor in the employment decisions of married women with children.

The type of global Army/family conflict measure used in this research may be adequate to capture conflicts stemming from the day-to-day time and schedule demands of the job. A different type of measure may be required, however, to capture conflicts stemming from the demands of the spouse's career. In the present research, the model tended to underpredict propensity to leave the Army for officers who fit the "dual career family" profile (i.e., fewer children and more highly educated, career-oriented wives). The addition of spouse career aspirations in the exploratory analyses added a significant, but very small increment to the explained variance in propensity to stay. Measures focusing specifically on relocation and travel conflicts and the overall implications of staying in the Army for the spouse's career might have explained more variance.

The importance of work/family conflict also suggests that a more detailed assessment of subjective norms may be useful. When family conflicts arise or are anticipated, pressures from the spouse to leave the organization may become an important factor in turnover decisions. A spouse's willingness to accommodate the demands of the employee's career may also determine the level of conflict experienced or moderate the effects of conflict on turnover decisions. Additional research on the types or sources of work/family conflict, as well as the consequences of conflict is clearly warranted.

Career Prospects and Work Satisfaction

The implications of career prospects for propensity to stay are best examined in the context of the effects of work satisfaction. Mobley et al. (1979) called for research on the joint contribution of job satisfaction (present affect) and job attraction (expected future affect) to turnover intentions or

behavior. The call for multivariate research was heeded, yet, methodological problems have hindered efforts to compare the relative effects of present and future oriented outcome measures.

One problem is that traditional job satisfaction measures typically reflect more than simply reactions to the immediate work situation. Global satisfaction measures capture evaluations of the future as well as the present situation (Ironson et al., 1988); and most summed facet satisfaction measures include an evaluation of promotion opportunities.

In contrast, the present model incorporates a narrower, more time-specific measure of current satisfaction. Only the most critical dimension of overall satisfaction was assessed (satisfaction with the work itself), and respondents were instructed to evaluate only their current assignment.

Outcome expectation measures in turnover research also tend to blur distinctions between present experiences and long-term expectations. Typical methods involve having employees rate a researcher generated list of outcomes in terms of desirability and attainability (e.g., Hom & Hulin, 1981; Hom et al., 1984; Mobley, Hand, Baker & Meglino, 1979; Motowidlo & Lawton, 1984), or simply expected satisfaction (Hinz & Nelson, 1990; Motowidlo, 1983). This method implies that parallel dimensions determine both current satisfaction and the expected utility of remaining in the organization. The common method also produces large correlations between current and expected satisfaction measures, reducing the likelihood that current and future oriented measures will be independent sources of variance in turnover intentions (e.g., Hinz & Nelson, 1990; Motowidlo & Lawton, 1984).

The focus on career prospects in the present research reflects a different perspective - namely, that long-term career goals, not desires for specific job attributes, provide the context for evaluating future opportunities in the organization. The relevance of career-related constructs in turnover research has been demonstrated in a variety of samples (Farris, 1971; Graen et al., 1973; Graen & Ginsburgh, 1977; Jans, 1988; Schneider & Dachler, 1978). However, a career prospects measure focusing specifically on career development and advancement opportunities has not been tested in a multivariate model of turnover intentions. The results of this research lend strong support to the utility of the construct. Perceptions of career prospects influenced intentions independently of the effects of other powerful antecedents. A more traditional summary measure of expected job outcomes might have had similar effects on propensity to stay. Career prospects appears to be a more useful construct, however, because it specifies both the context for evaluating future opportunities and the dimensions likely to be important.

Current work satisfaction also demonstrated direct effects on propensity to stay, independent of the influence of career prospects. This effect contradicts the present model but supports the hypothesized joint contribution of satisfaction and expected utility in the Mobley et al. (1979) model. An independent relationship was not expected in this sample primarily because of the temporary nature of military job assignments and the long-term career implications of the decision to leave. In this case, in particular, utility maximization principles would predict that immediate satisfaction would be far less important than prospects for longer-term career satisfaction in determining intentions.

The contrary results suggest that rational, utility based decision models do not adequately capture the effects of job perceptions on turnover intentions. Multiple processes are involved either within or across individuals. Mobley et al. (1979), suggested that satisfaction (present oriented) may be more important than "attraction" (future oriented) for individuals with stronger needs for immediate gratification. A short-term perspective may also reflect the absence of a strong career orientation or the lack of clearly formulated career goals.

In future research, satisfaction and expectation measures that are time specific (i.e., clearly current or future oriented) and focus on a limited, theoretically derived set of dimensions may be most useful. Specific measures reduce the conceptual and empirical overlap across constructs and point more clearly to the areas organizations need to address if they are to influence turnover.

Years of Service

Years of service had a small direct effect on propensity to stay. Even a small effect is noteworthy, however, in a sample with such a restricted range of experience.

In line with research derived from the investments, or side-bet framework, tenure was conceptualized as a surrogate for the individual's level of investment in the organization. Accordingly, the observed effects are interpreted as support for the hypothesis that the costs of leaving the organization are an independent source of variance in turnover intentions. This interpretation seems justified in military settings because eligibility for retirement benefits is solely a function of years of service, and much of the knowledge acquired through experience is specific to the organization. Where the relationship between time and investments is more tenuous, however, perceptual measures of the costs of leaving the organization are required to test the investments model (Meyer & Allen, 1984).

Regardless of how costs are measured, the investments model fits within the expected utility framework. Evidence that investment or "side bet" losses are related to turnover suggests that economic utility maximization principles influence turnover decisions. The critical question then centers on the relative importance of economic costs in the larger domain of factors (utility based or not) that influence turnover decisions. For the junior officers in this research, tenure related effects are quite small relative to other factors. It is reasonable to assume, however, that tenure-related investments play an increasingly important role in turnover decisions as they become more substantial.

A second, related question concerns the point at which tenure related investments in an organization become the dominant factor in turnover decisions. Tenure may moderate the relationship between other variables and turnover intentions, but not necessarily in a continuous linear function. It would be useful to try to identify organizational tenure stages in which (a) investments are negligible and have little or no influence on turnover decisions, (b) investments are small to substantial, and variations in investment levels contribute additively to turnover intentions, and (c) investments are so large that voluntarily leaving the organization before retirement is no longer perceived to be a viable option. Very different models might be required to explain turnover decisions in these organizational subgroups.

It might also be fruitful to look at tenure as an outcome variable. Although typically treated as an antecedent, demographic type variable, from a longitudinal perspective tenure can be viewed as the outcome of an earlier decision to remain in the organization (i.e., a decision made before researchers arrived to measure intentions). In other words, accumulated time and tenure related investments in an organization may be by products rather than causes of decisions to stay.

From this perspective, relationships between tenure and identification, here, and tenure and attitudinal commitment elsewhere (Mathieu & Zajac, 1990; Meyer & Allen, 1984) could result from the impact of early identification on propensity to stay. If early attitudes cause tenure, the total effects of attitudinal variables will be underestimated in models that fail to analyze these prior, indirect effects. Longitudinal analyses are required to identify the role played by tenure related investments in turnover decisions. However, when only cross sectional samples are available, it might be instructive to conduct separate analyses within different tenure groups and to interpret findings in light of when employees say they made decisions to stay or leave.

Antecedent Variables and Indirect Effects

Analyses of the effects of the antecedent variables in the model also have implications for future research.

Work Satisfaction. As noted above, work satisfaction had indirect effects on propensity to stay through both intervening variables. The path from satisfaction to career prospects was hypothesized to be significant, and is consistent with Motowidlo and Lawton's (1984) conclusion that the effects of job satisfaction on turnover intentions are mediated by outcome expectations. Yet, contrary to the prediction of the model and Motowidlo and Lawton's (1984) results, work satisfaction also had direct effects on propensity to stay.

Whether or not satisfaction displays effects independent of expectations is likely to be largely a function of the overlap between the two. The relatively specific work satisfaction and career prospects measures used in this research were only moderately correlated ($r=.49$). In samples where independent effects were not found, correlations between satisfaction and expectation measures exceeded .70 (Motowidlo & Lawton, 1984) and .80 (Hinze & Nelson, 1990). Thus, the predicted independent effects of present and future satisfaction in the Mobley et al. (1979) model are most likely to be supported only when fairly specific, independent measures are used.

The significant path from work satisfaction to organizational identification was not predicted by the model. Operational support, inspirational leadership and prior career orientation were hypothesized to be the important determinants of identification. The significant path from work satisfaction to identification is, however, consistent with most conceptualizations of the relationship between satisfaction and commitment (Meyer & Allen, 1987; Williams & Hazer, 1986). Identification appears to be determined, in part, at least, by intrinsically satisfying work experiences in the organization. Work satisfaction itself may color feelings about the organization, or the employee's sense that he is important, and able to make a meaningful contribution to the organization may foster identification and commitment (Buchanan, 1974).

The possibility of causal effects in the opposite direction should also be entertained, however. Individuals who identify with the organization may be more inclined to emphasize the positive aspects of their work assignments. Longitudinal analyses designed to test directional as well as reciprocal effects are required to sort out these effects.

Operational support. Operational support is the only other antecedent variable with significant paths to both intervening variables. The effects of support on identification parallel the

effects of organizational dependability (Buchanan, 1974; Spencer & Steers, 1980; Steers, 1977), service effectiveness (Jans, 1988) and organizational support (Eisenberger et al., 1986) on commitment. It is clear that perceptions of organizational functioning influence feelings toward the organization. When organizational practices are inconsistent with stated organizational values (e.g., mission accomplishment) the effects on identification or commitment may be especially strong (DeCotiis & Summers, 1987).

The hypothesized link between operational support and career prospects was predicated on the assumption that level of support affects performance, and performance evaluations largely determine promotion prospects. Although this specific mediational hypothesis was not tested, the relatively strong path from operational support to career prospects suggests that efforts to confirm this link would be useful.

Prior intentions. In light of previous research on the stability of prior career intentions in the military (Bachman & Blair, 1975; LaRocco & Jones, 1980; Youngblood et al., 1983), the fact that retrospective pre-entry intentions were only weakly related to propensity to stay two to six years later is surprising. The weak paths from prior intentions to the variables hypothesized to mediate this relationship were also unexpectedly small. Only the path to identification was significant. These results suggest that to some extent, pre-entry intentions reflect values that promote subsequent identification. However, the assumption that early plans influence career prospects (through stable occupational goals) was not supported.

The lack of strong direct or indirect effects for prior career orientation suggests that situational factors and organizational experiences are more important determinants of attitudes and perceptions than pre-entry values or career expectations. Hall (1976) notes that as employees acquire work experience, their career goals and occupational self-concept are likely to change. The career goals of recent college graduates may be especially unstable, resulting in a re-evaluation of the opportunities for a satisfying career in the organization.

At the same time, changes in the organization itself may alter initial perceptions of internal career opportunities. A particularly significant organizational change experienced by officers in the present sample is the "downsizing" of the Army. Most of the officers studied here were commissioned before it was apparent that the military would suffer massive budget cuts and manpower reductions. Perceptions of career prospects in the Army may have changed markedly in light of reduced prospects for advancement and job security.

Branch match. The branch match variable was conceptualized as a type of internal person-environment fit measure. In this research the measure was dichotomous and skewed (the majority of officers reported a good match), but even with these limitations the measure displayed the predicted relationship to career prospects. Comparable measures in other organizations might focus on preferences for a different department or career track in the organization. Internal fit measures, particularly in conjunction with perceived opportunities for internal transfers, could help to explain movement within, as well as across organizations (Jackofsky & Peters, 1984).

Inspirational leadership. Inspirational leadership was related to organizational identification, although the effects were not as large as expected. The lack of variance in the measure might be responsible for the small amount of variance explained. Nearly everyone, it appeared, could identify at least one somewhat inspirational leader in their current assignment. A more discriminating inspirational leadership measure, or one focusing on immediate supervisors might have stronger effects. The strong identification/propensity to stay relationship suggests that experiences with inspirational or "transformational" leaders (Bass, 1985) warrant further study as indirect determinants of turnover decisions.

Total Effects

When direct and indirect effects are summed, Army/family conflict appears to have larger total effects than any other variable in the model. These results may be misleading, however. In the omitted parameters test, Army/family conflict is treated as a potential omitted "cause" of the intervening variables. The path coefficient from conflict to identification is substantial, yet, because the relationship was not predicted there is no a priori basis for assuming that the implied causal direction is correct.

It is certainly conceivable that a high level of conflict could inhibit tendencies to identify with the organization. When work demands interfere with family life, employees may have to psychologically distance themselves from the organization in order to cope with and resolve conflicts. Conflicts that force employees to prioritize their obligations may enhance the salience of family obligations at the expense of organizational roles.

Yet the direction of causal influence may depend on which develops first, identification with family roles or identification with the organization. If identification with the organization is already well-established, subsequent family role obligations may be defined in a way that reduces the experience of conflict. Organizational demands may be accepted as

legitimate and necessary, and families may be expected to accommodate these demands. Strongly identified officers will most likely marry women whose values are compatible with their own. Thus, a strong early identification with either family or organizational roles may partly determine how one's role in the other domain is defined. To the extent that Army/family conflict is determined by organizational identification, the total effects of conflict will be overestimated, and the effects of identification will be underestimated, in the implicit causal model tested here.

Another limitation of these analyses, and the model itself, is that organizational identification and career prospects are treated as exogenous to each other. If, in fact, one variable is a cause of the other the total effects of the causal variable will be underestimated. Gaertner and Nollen (1989) for example, found that employee perceptions that the firm supported individual training, development and promotion from within policies were strongly related to measures of affective commitment. They suggested that employees given this type of support derive a positive self-concept from the employment relationship and tend to feel an obligation to reciprocate by supporting the organization. Both the sense of competence associated with the organizational role and reciprocity norms were hypothesized to account for the relationship between supportive personnel practices and identification. Positive perceptions of one's career prospects in the organization may encourage identification in a similar manner. This would suggest that the total effects of career prospects are underestimated in the present model because the indirect effects through identification are not analyzed.

Limitations

Theoretical limitations of the present research were noted above; causal linkages in the model are incompletely specified. The model also fails to specify paths that in the complicated web of real world relationships are likely to be reciprocal. More sophisticated and complete causal hypotheses may emerge as theory development progresses and hopefully can be tested through longitudinal analyses. Path analysis in cross-sectional samples can confirm the plausibility of theoretically derived causal linkages, but longitudinal analyses are required to convincingly demonstrate causal effects.

The restricted nature of the sample in this research is also a limitation, yet one that also has certain advantages. The focus on young, married, males in a unique type of organization limits the generalizability of the research results. On the other hand, testing models in clearly identifiable subpopulations may point to the organizational and demographic characteristics that need to be addressed in broader turnover research.

Implications for the Army

The strong effect of organizational identification on turnover intentions suggests that organizations should make a concerted effort to foster organizational identification among their employees. Schneider (1985), however, warns that selection and socialization practices that promote homogeneity and conformity in the work force risk diminishing the potential for creativity and innovation. Intensive, value-oriented socialization efforts may also polarize attitudes in both directions, alienating those who don't "buy into" the process.

A more practical approach might be for organizations to work on establishing a climate that encourages identification. A combined emphasis on quality and operational support for workers is likely to facilitate performance and engender pride in the organization. At the same time, policies and practices that demonstrate respect for family needs may mitigate both objective work/family conflicts and psychic conflicts produced by incompatible organizational and family values. Flexibility may be the key to both enhancing work satisfaction and reducing work/family conflicts (Teplitzky, 1988a). When demands that interfere with family life are unavoidable, allowing employees the flexibility to accommodate family needs when the occasion arises may go a long way toward mitigating the negative effects of demanding careers.

The strong total effects of work satisfaction on turnover intentions lend further support to the well documented importance of satisfying work assignments. Attempts to ensure that particularly satisfying assignments coincide with critical career decision points (e.g., end of obligation) could pay off in terms of lower turnover. Career development programs that help employees formulate, as well as achieve, career goals might also reduce turnover, both by facilitating career progress and by making temporary, less satisfying assignments more tolerable.

Summary of Implications for Future Research

In summary, the results of this research suggest that the direct determinants proposed in the model may help to explain and predict employee turnover decisions. Work/family conflict appears to be particularly important and its impact on turnover is not likely to be limited to military settings. Organizational identification also seems to be a promising construct, although it may be less relevant in organizations that are not characterized by a distinctive mission or ideology. The utility of a career oriented perspective in turnover research was also supported, although the importance of career versus immediate job considerations may vary across occupational groups. A continued focus on tenure, particularly in the context of the investments framework, is also recommended. As others have noted, however,

the effects of investments on employment decisions may be captured best by broader, perceptual measures.

In addition to supporting the importance of the hypothesized direct determinants, results also suggested ways the model might be improved. First of all, work satisfaction is clearly an influential factor in turnover decisions, and direct as well as indirect effects should be posited. Measures that are clearly present oriented and focus on intrinsic satisfaction are most likely to display effects independent of those associated with expected outcome and commitment measures. Second, the exploratory analyses indicated that many officers felt constrained to stay in the military because of personal or situational factors. In this and other research, employee evaluations of the availability of acceptable alternatives have failed to explain much variance in turnover intentions. The single item measure of personal/family constraints, however, was among the most powerful determinants of intentions in this research. Measures of alternatives may not tap time or financial constraints that may limit an employee's ability to conduct a thorough job search or relocate the family. The recent birth of a child, for example, or a spouse's ties to a job, school or friends in the community, or a large investment in a new home may all operate to constrain an individual's options. Additional effort to determine more precisely the types of personal and family related constraints employees experience appears warranted.

It would also be interesting in future longitudinal research to assess the impact of constraints on the relationship between turnover intentions and behavior. In the military, many service members who say they intend to leave fail to do so (Szoc, 1982). It would be useful from both an applied and a theoretical perspective to try to learn why and when individuals fail to follow through on intentions to leave. This type of analysis would be particularly useful to organizations, like the Army, facing requirements to reduce the size of the work force. Instead of laying off employees, management might be able to encourage voluntary turnover by removing obstacles that prevent some individuals from acting on their inclinations to leave.

Important issues that remain unresolved in this research concern the determinants of organizational identification and work/family conflict, as well as the nature of the relationship between these two variables. Longitudinal analyses will be required to determine the dominant direction of influence. More discriminating measures of leadership and measures that assess career goals and work/family priorities may prove to be useful in efforts to understand the complex turnover decision process. Mobley et al. (1979), for example suggested that the centrality of work in an individual's life could moderate the effects of satisfaction and expected outcomes on turnover intentions.

A final consideration in the design of future turnover research is the nature of the population or organization of interest. Numerous studies focus on specific occupational groups, yet discussions linking group characteristics to components of the proposed models are rare. The model tested in this research reflects an analysis of the factors likely to be particularly salient to young, married Army officers. Tests of similar models in different subpopulations should clarify the extent to which the results obtained here are attributable to the special characteristics of the research population.

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APPENDIX A

A PRIORI AND FINAL SCALE ITEMS FOR VARIABLES IN OFFICER CAREER DECISION MODEL

PROPENSITY TO STAY

Var Name

Survey Item

INTEND Which of the following best describes your current career intentions?

- a) I plan to stay in the Army beyond 20 years
- b) I plan to stay in the Army until retirement at 20 years
- c) I plan to stay in the Army beyond my obligation, but am undecided about staying until retirement
- d) I am undecided whether or not I will stay in the Army upon completion of my obligation
- e) I will probably leave the Army upon completion of my obligation
- f) I will definitely leave the Army upon completion of my obligation

PLNNOW Right now I am ...

- a) planning on an Army career
- b) leaning toward an Army career
- c) undecided
- d) leaning toward a civilian career
- e) planning on a civilian

The instructions for the set of items including PLNNOW read as follows:

For some officers, career plans change over time, while for others, career plans remain constant. Here we are interested in finding out whether or not your own plans have changed. Please use the following scale to indicate (to the best of your recollection) how you felt at the time of each event/experience described below.

CAREER PROSPECTS

CARSAT All in all how satisfied are you with your career prospects in the Army?

- a) very satisfied
- b) satisfied
- c) neutral
- d) dissatisfied
- e) very dissatisfied

OPPADV How good are the opportunities for advancement in your branch for someone who has had the types of assignments you have had?

- a) excellent
- b) very good
- c) good
- d) limited
- e) very limited

HOWCOM How competitive for schools and promotions would you be if you were to be evaluated right now taking the nature of your assignments, as well as your performance, into account?

- a) I'd have a strong advantage
- b) I'd have an advantage
- c) No advantage or disadvantage
- d) I'd be at a disadvantage
- e) I'd be at a strong disadvantage

The remaining 4 items use the following scale:

- a) strongly agree
- b) agree
- c) neither agree nor disagree
- d) disagree
- e) strongly disagree

AGHIGH I am confident I will be promoted as high as my ability and interest warrant if I stay in the Army.

AGASGN I am confident I will get the kinds of assignments I need to be competitive for promotions.

AGSKIL I am very likely to get assignments that match my skills and interests if I stay in the Army.

LIKWRK I can get ahead in the Army doing the kinds of work I like best. (DELETED)

ORGANIZATIONAL IDENTIFICATION

(Meyer & Allen, 1984)

All items use the following scale:

- a) strongly agree
- b) agree
- c) neither agree nor disagree
- d) disagree
- e) strongly disagree

ARMEAN	The Army has a great deal of personal meaning for me.
ARBLNG	I do not feel a strong sense of belonging to the Army. (Reverse)
ARTALK	I enjoy discussing the Army with people outside it.
AREMOT	I do not feel "emotionally attached" to the Army. (Reverse)
ARPROB	I really feel as if the Army's problems are my own.
ARPART	I do not feel like "part of the family" in the Army. (Reverse; DELETED)
ARATCH	I think I could easily become as attached to another organization as I am to the Army. (Reverse)

ANTICIPATED WORK/FAMILY CONFLICT

All items use the following scale:

- a) strongly agree
- b) agree
- c) neither agree nor disagree
- d) disagree
- e) strongly disagree

- WRKBAL If I were to make the Army a career, I could maintain the kind of balance I want between my work and personal life. (Reverse)
- CARCMD The demands of an Army career would make it difficult to have the kind of family life I would like.
- CARCON I foresee a lot of conflict between my work and family life if I make a career of the Army.
- CARFAM If I were to stay in the Army, I could provide my family with the opportunities and experiences I think are most important. (Reverse; DELETED)

PERSON/BRANCH MATCH

BRANIN What branch are you in (your permanent assignment, not the branch you may have been detailed to)?

(list of branches)

BRANWA If you could be in any branch you wanted, which branch would you select?

(list of branches)

TRANBR Do you intend to try to transfer into a different branch?

- a) no - not interested in changing branches
- b) no - I cannot get into the branch I want
- c) yes - but I do not expect to get branch I want
- d) yes - and I do expect to get the branch I want

BRANCH MATCH scores:

1 = Good Match

Branch in equals branch want, or branch in does not equal branch want, but officer intends to transfer and expects to get branch he wants (response "d" for TRANBR); also officers with missing data for any of the three items were assigned the modal value of "1".

0 = Poor Match

Branch in does not equal branch want, and TRANBR does not equal "d".

PRIOR CAREER ORIENTATION

Instructions for Item Set

For some officers, career plans change over time, while for others, career plans remain constant. Here we are interested in finding out whether or not your own plans have changed. Please use the following scale to indicate (to the best of your recollection) how you felt at the time of each event/experience described below.

- a) planning on an Army career
- b) leaning toward an Army career
- c) undecided
- d) leaning toward a civilian career
- e) planning on a civilian

PLNPRE When I began precommissioning training (e.g.,
USMA, ROTC) I was...

PLNCOM At the time I received my commission I was

CURRENT WORK SATISFACTION

SATWRK How satisfied are you with the kinds of work you do in your current assignment?

- a) very satisfied
- b) satisfied
- c) neutral
- d) dissatisfied
- e) very dissatisfied

Respondents were also asked to evaluate the nature of the work in their current assignment using the following scale:

- a) very good
- b) good
- c) fair
- d) poor
- e) very poor

OPPLRN Opportunity to learn/develop skills relevant to your career.

OPPWRK Opportunity to do work that interests you.

OPPACT Opportunity to exercise initiative/put your ideas into action.

OPERATIONAL SUPPORT

Respondents were asked to provide their assessments of the Army's effectiveness in 7 areas using the following scale:

- a) very effective
- b) effective
- c) borderline
- d) ineffective
- e) very ineffective
- f) don't know

PRVSUP	Providing organizational support
PRVCOM	Providing communication channels
PRVINP	Providing information resources
PRVMAT	Providing materiel resources
PRVRES	Providing personnel resources
PRVFDB	Providing feedback on duty performance
PRVRCG	Providing recognition for a job well done

Note: This set of items was originally construed as an organizational effectiveness scale, however the items did not appear to do justice to such a complex construct. Accordingly, the eighth item "Accomplishing the Army mission" was dropped, and the items were interpreted more narrowly as tapping the level of operational, or work-related support provided by the Army.

Depending on the item, 1 to 14 respondents used the "Don't Know" alternative. These responses were recoded to "Borderline" prior to computing scale scores to avoid losing additional cases for the analysis. The "borderline" response (3) was the closest to the overall mean and similar conceptually (i.e., no strong opinion either way) to "don't know".

INSPIRATIONAL LEADERSHIP

Respondents were first asked the following question:

Who do you consider to be the best leader in your current assignment?

- a) your rater
- b) your senior rater
- c) a peer
- d) an officer not in your chain of command
- e) an NCO
- f) an instructor
- g) other

Ratings of this leader on five dimensions were used to compute the scale score; all ratings were based on the following scale:

How often does this leader ...

- a) always
- b) frequently
- c) usually
- d) seldom
- e) never

LDRENT	Inspire enthusiasm.
LDRLOY	Inspire loyalty.
LDRTU	Inspire trust.
LDRHLP	Help others to understand the unit mission.
LDRGOL	Help others to understand the Army's goals.